Steam Dinubing Supplier Philadelphia 5



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# C. J. RAINEAR & CO.

518 ARCH ST., PHILADELPHIA, PA.

# STEAM AND PLUMBING SUPPLIES



SELLING AGENTS FOR

# WM. POWELL COMPANY IMPROVED STEAM SPECIALTIES

SMOOTH-ON IRON COMPOUNDS & CEMENTS

# RAINEAR BOILERS

ROUND AND SECTIONAL FOR STEAM AND WATER

PIPE CUT AND THREADED TO PLAN





# STANDARD WEIGHT PIPE



PLAIL A

## FOR STEAM, WATER, GAS AND OIL

#### SUBJECT TO CHANGE WITHOUT NOTICE

Nominal Size, Inside Diameter, Inches	Price, per Foot, Black and Gal- vanized	Thickness, Inches	Nominal Weight, per Foot, Pounds	Number of Threads per Inch of Screw
1/8 1/4 3/8 1/2	$\begin{array}{c} .05 \frac{1}{2} \\ .05 \frac{1}{2} \\ .05 \frac{1}{2} \\ .08 \frac{1}{2} \end{array}$	.068 .088 .091 .109	. 24 . 42 . 56 . 84	27 18 18 18
34 1 1 14 1 1/2 2	$\begin{array}{c} .11 \frac{1}{2} \\ .16 \frac{1}{2} \\ .22 \frac{1}{2} \\ .27 \\ .36 \end{array}$	.113 .134 .140 .145 .154	1.12 1.67 2.24 2.68 3.61	14 11 ½ 11 ½ 11 ½ 11 ½ 11 ½
2 ½ 3 ½ 4 ½ 4 ½ 5	$.57\frac{1}{2}$ $.75\frac{1}{2}$ $.95$ $1.08$ $1.30$ $1.45$ $1.88$	.204 .217 .226 .237 .246 .259	5.74 7.54 9.00 10.66 12.49 14.50 18.76	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
7 8	$\frac{2.35}{2.50}$	.301 .276	23.27 25.00	
8 9 10 10 10 11 12 12	2 . 82 3 . 40 3 . 20 3 . 50 4 . 00 4 . 50 4 . 50 4 . 90	.322 .344 .278 .306 .366 .375 .328	28.18 33.70 32.00 35.00 40.00 45.00 45.00 49.00	8 8 8 8 8 8

Unless otherwise ordered, black pipe, random lengths, with threads and couplings, will be shipped.

For cut lengths an extra charge will be made above random lengths.

For galvanized pipe an extra charge will be made above black. For asphalted pipe an extra charge will be made above black.

# X STRONG PIPE

Size	Price, per Foot	Actual Outside Diameter, Inches	Nominal Inside Diameter, Inches	Thickness, Inches	Nomina Weight per Foot Pounds
144 8 8 8 3 4 1 1 1 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	.11 .11 .11 .12 .15 .22 .30 .36 .50 .81 1.05 1.33 1.50 1.95 2.16 2.90 3.80 4.30 5.00 6.25 6.50	.40 .54 .67 .84 1.05 1.31 1.66 1.90 2.37 2.87 3.50 4.50 5.56 6.62 7.62 8.62 9.62 10.75 11.75	.20 .29 .42 .54 .73 .95 1.27 1.49 1.93 2.31 2.89 3.35 3.81 4.28 4.81 5.75 6.62 7.62 8.62 9.75 10.75	.10 .12 .12 .14 .15 .18 .19 .20 .22 .28 .30 .32 .34 .36 .37 .43 .50 .50 .50	.29 .54 1.09 1.39 2.17 3.00 3.63 5.02 7.67 10.25 12.47 14.97 14.97 14.97 43.00 48.73 54.74 60.08 65.42

# XX STRONG PIPE

Size	Price, per Foot	Actual Outside Diameter, Inches	Nominal Inside Diameter, Inches	Thickness, Inches	No minal Weight per Foot, Pounds
1 1 1/4 1/2 2 1/2 1/2 3 3 1/2 4 1/2 6 6 7 8	.25 .30 .37 .52 .65 .95 1.37 1.92 2.45 2.85 3.30 3.80 5.30 6.25 7.20	.84 1.05 1.31 1.66 1.90 2.37 2.87 3.50 4.00 4.50 5.00 5.56 6.62 7.62 8.62	.24 .42 .58 .88 1.08 1.49 1.75 2.28 2.71 3.13 3.56 4.06 4.87 5.87 6.87	. 29 .31 .36 .38 .40 .44 .56 .60 .64 .68 .71 .75 .87 .87	1.70 2.44 3.65 5.20 6.40 9.02 13.68 18.56 22.75 27.48 32.53 38.12 53.11 62.38 71.62

### LARGE O. D. PIPE

Size, O. D.	14 Inch Thick	<sup>5</sup> Inch Thick	3 Inch Thick	Thick	½ Inch Thick
14	3.85	4.80	5.75	6.65	7.60
15	4.15	5.15	6.15	7.15	8.15
16	4.40	5.50	6.60	7.65	8.70
17	4.70	5.85	7.00	8.15	9.25
18	4.95	6.20	7.40	8.60	9.80
20	5.50	6.90	8.25	9.60	10.95
21		7.25	8.65	10.10	11.50
22		7.60	9.10	10.60	12.10
21 22 24 26			9.95	11.60	13.15
26			11.30	13.15	14.95
28			12.15	14.15	16.15
30				15.20	17.65

This pipe will be shipped in random lengths, plain ends, unless otherwise ordered.

For cut lengths an extra charge above random will be made.

For threaded pipe an extra charge above plain ends will be made.

We can thread up to 22 inches.

We can thread and couple up to 20 inches.

LINE PIPE
FOR OIL, GAS AND HIGH PRESSURE MAINS

Nominal Inside Diameter, Inches	Actual Outside Diameter, Inches	Weight per Foot, Pound	Number of Threads per Inch of Screw	Price per Foot
$\begin{array}{c} 2\\2\\1\\2\\3\\1\\2\\4\\4\\4\\1\\2\\5\\6\\6\\7\\8\\9\\10\\12\\\end{array}$	2.37 2.87 3.50 4.00 4.50 5.56 6.62 7.62 8.62 9.68 10.75	3.61 5.74 7.54 9.00 10.66 12.34 14.50 18.76 23.27 28.18 33.70 40.06 49.00	11½ 8 8 8 8 8 8 8 8 8 8 8	Prices Quoted on Application

Line Pipe of special weight, etc., made to order, prices and information furnished on application.



### STANDARD BOILER TUBES

LAP-WELDED



PLATE A

#### OF STANDARD GAUGE, NOT OVER 20 FEET LONG

#### SUBJECT TO CHANGE WITHOUT NOTICE

Actual Diameter Outside, Inches	Price per Foot	Thickness, Inches	Thickness Nearest Bgm. W. G. Gauge	Nominal Weight per Foot, Pounds
1	.30	.095	13	. 90
1 14	.28	.095	13	1.15
1 1/2	. 27	.095	13	1.40
1134 14534 14534 15 221223 33144 15 67 8 9	.28 .27 .22 .20 .24 .28 .34	.095	13	1.63
2	. 20	.095	13	1.91
21/4	.24	.095	13	2.16
$2\frac{1}{2}$	.28	. 109	12	$\frac{2.16}{2.75}$
2 3/4	.34	. 109	12	3.04
3	.35	. 109	12	3.33
3 1/4	. 40	. 120	11	3.96
$3\frac{1}{2}$	.44	.120	11	4.28
3 3/4	.50	.120	11	4.60
4	. 55	. 134	10	5.47
$4\frac{1}{2}$	.62	. 134	10	6.17
5	.75	. 148	9	7.58
6	1.00	. 165	9 8 8 8 7 6	10.16
7	1.20	. 165	8	11.90
8	1.50 1.70	. 165	8	13.65
	1.70	.180	7	16.76
10	2.10	. 203	. 6	21.00
11	2.50	. 220	5	25.00
12	2.90	. 229	4 1 2	28.50
13	3.20	. 238	4	32.06
14	3.65	. 248	$\frac{3}{3}^{\frac{1}{2}}$	36.00
15	4.10	. 259	3	40.60
16	4.60	. 270	$2\frac{1}{2}$	45.20

For extra wire gauge boiler tubes, away from standard not exceeding four wire gauges, one cent for each inch in diameter of tube for each additional gauge will be charged and added to net of invoice.

Tubes more than four wire gauges heavier than standard will be charged by the pound the same as plain end stay tubes, arch pipes, dry pipes and water grates.

## PIPE CUT TO ORDER

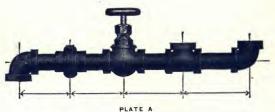


DIAGRAM SHOWING SCREWED VALVES AND FITTINGS

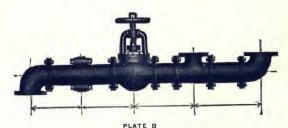


DIAGRAM SHOWING FLANGED VALVE AND FITTINGS

We are equipped with the most improved facilities for cutting, threading and fitting all sizes of pipe to sketch.

In laying out work of this kind great care should be taken in making sketches. All measurements should be given center to center, as shown in above diagrams. It is also necessary to know for what purpose the pipe is to be used and pressure required to stand.

#### PRICE FOR CUTTING AND THREADING PIPE

SizeInches	18	1/4	3.8	1/2	34	1	1 1/4	1 1/2	2
PricePer Cut	.06	.06	.06	.06	.06	.06	.08	.10	.14
SizeInches	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8
PricePer Cut	. 20	.30	. 40	.40	. 50	. 60	.90	1.10	1.20
SizeInches	9	10	12	14 o. d.	15 o. d.	16 o. d.	18 o. p.		
Price Per Cut	2.00	2.50	3.50	6.50	7.50	10.00	20.00		

# CAST IRON FITTINGS







PLATE B. R. AND L. ELBOW



PLATE C. 450 ELBOW

SizeInch	es 1/4	3/8	1/2 3	34 1	11/4	1 1/2	2	2 1/2	3 3 1/3	4
Elbows, R. H Eac	eh .03	.05	.06 .0	$08.10\frac{1}{2}$	.16	.20	.28	. 50	75 1.0	51.2
Elbows, R. and L Eac	ch . 06	.06	.07 .0	09   .12	.18	. 23	. 32		.85 1.2	
Elbows, L. H Eac	311 . 06	.06	.07 .0	09 .12	.18	. 23	.32		.85	
Elbows, Reducing Eac Elbows, Pitched Eac	h	.00	.07 .0	19 .12	.18	. 23	.32		.85 1.2	
Elbows, Side Outlet. Eac	oh		10	10 . 15	.20	. 25	.35		00 1.3	
45° ElbowsEac	h 06	06	07	10 19	.19	. 24			25 3.1	
	.00	.00	.07	10 . 12	. 13	. 24	.34	. 60	.90 1.2	5 1.4
		5	6	7	8	9	10	12	14	- -
SizeInches	4 1/2	5	6	7	8	9	10	12	14	15
SizeInches Elbows, R. H Each	$\frac{4\frac{1}{2}}{1.75}$	5 2.00	$\frac{6}{2.75}$	7 4.70	8 6.75	9 .00	10 13.50	12 20.00	$\frac{14}{57.00}$	$\frac{15}{70.0}$
SizeInches Elbows, R. H Each Elbows, R. and L. Each Elbows, Reducing Each	$\frac{4\frac{1}{2}}{1.75}$ $\frac{2.25}{2.00}$	5 2.00 2.40 2.30	$ \begin{array}{c c} 6 \\ \hline 2.75 \\ 3.40 \\ 3.15 \end{array} $	7 4.70	8 6.75	9 9.00	10 13.50	12 20.00	14 57.00	15 70.0
SizeInches Elbows, R. H Each Elbows, R. and L. Each Elbows, Reducing Each Libows, Pitched. Each	$\frac{4\frac{1}{2}}{1.75}$ $\frac{2.25}{2.00}$	5 2.00 2.40 2.30	$ \begin{array}{c c} 6 \\ \hline 2.75 \\ 3.40 \\ 3.15 \end{array} $	7 4.70 5.40	8 6.75 7.75	$\frac{9}{9.00}$	10 13.50 15.50	12 20.00 23.00	14 57.00 63.00	15 70.0
SizeInches Elbows, R. H Each Elbows, R. and L. Each Elbows, Reducing Each Elbows, Pitched. Each Elbows, Side Out't Each 15° Elbows. Each	$   \begin{array}{r}     4\frac{1}{2} \\     \hline     1.75 \\     2.25 \\     2.00 \\     \hline     5.25   \end{array} $	5 2.00 2.40 2.30 3.00	6 2.75 3.40 3.15 8.25	7 4.70 5.40	8 6.75	9 9.00	10 13.50 15.50	$ \begin{array}{ c c c c c c } \hline 12 \\ 20.00 \\ 23.00 \\ 60.00 \\ \hline \end{array} $	14 57.00 63.00	15 70.0

### ECCENTRIC TEES



PLATE D



PLATE E

These fittings are designed to prevent the accumulation and lodgment of condensation.

Orders must be accompanied with sketch, showing position in which the fitting is to be placed.

Prices on application.



## CAST IRON FITTINGS







PLATE B. REDUCING TEE

SizeInches	1/4	3 8	1/2	3/4	1	1 1/4	1 1/2	2
Tees Each Tees, Reducing. Each		.08	.09	.12	.15	.23	.29	.41
Tees, with Side Outlet Each			.27	.36	.45	.70	.90	1.25
SizeInches	$2\frac{1}{2}$	3	3 1/2	4	4 1/2	5	6	
TeesEach	.73	1.10	1.50	1.75	2.55	3.00	4.00	
Tees, Reducing Each Tees, with Side OutletEach	2.25	$\frac{1.25}{3.25}$	4.50	$\frac{2.00}{5.25}$	$\frac{2.95}{7.65}$	9.00	$\frac{4.60}{12.00}$	
SizeInches	7	8	9	10	12	14	15	
TeesEach	6.80	9.75	13.00	19.50	29.00	75.00	90.00	
Tees, Reducing Each Tees, with Side OutletEach	7.80	11.25	15.00	22.50	33.50	83.00	100.00	



PLATE C. CROSS



PLATE D. Y BRANCH

SizeInches	3 8	1/2	34	1	1 1/4	1 1/2	2
Crosses Each	.15	. 16	. 22	. 27	.42	. 53	.75
Crosses, Reducing Each	.18	. 18	. 25	.30	. 46	. 60	.83
Y Branches Each		. 20	. 28	.34	. 54	. 66	.94
Y Branches, Reducing Each		. 23	. 33	. 40	. 62	.76	1.08
SizeInches	2 1/2	3	3 1/2	4	4 1/2	5	6
Crosses Each	1.30	2.00	2.70	3.15	4.60	5.50	7.25
Crosses, Reducing Each	1.45	2.20	3.00	3.50	5.10	6.00	8.00
Y Branches Each	1.66	2.50	3.50	4 00	5.90	7.00	9.20
Y Branches, Reducing Each	1.90	2.90	4.00	4.60	6.80	8.00	10.60
SizeInches	Topic State Co.	8	9	10	12	14	15
CrossesEach	12.25	17.50	23.50	35.00	52.50	110.00	130.00
Crosses, ReducingEach	13.50	19.25	26.00	38.50		120.00	143.00
Y Branches Each	15.60	22.50	30.00	45.00	67.00		
Y Branches, Reducing Each	18.00	26.00	35.00	51.75	77.00		

# CJ. Rainear. 2. Co. \$

CAST IRON FITTINGS
RETURN BENDS







PLATE B. OPEN



PLATE C. BACK OUTLET

Return Bends, Size. Ins.	1/0	34	1	$1\frac{1}{4}$	1 ½	2	2 1/2	3	3	1/2	4	4 1/2	5	6
Close. Ea. Open. Ea. Back Outlet. Ea. Close, R. & L. or L. H. Ea. Open, R. & L. or L. H. Ea.	.25	.38	.42	.60	.80	1.15	$\frac{1.35}{2.00}$	$\frac{2.20}{3.00}$	4.	00	6.50	7.00	11.00	13.50

#### DIMENSIONS OF RETURN BENDS

									_				
Size of PipeInches	1/2	34	1	1 1/4	1 1/2	2	$2\frac{1}{2}$	3	3 1/2	4	$ 4\frac{1}{2} $	5	-6
Close, Center to Center In.	1 1/4	1 1/2 1	3/4	$\frac{1}{2\frac{1}{4}}$	21/2	3 1/4	3 5%	4 3/8	5	6			
Back Outlet, C. to C., Open, In.	1 94	214 2	1/2	3	3 1/2	4	5 3 8	6 1/2		7	8	9	10
Back Outlet, C. to C., Close. In.		1 1/2 1	$\frac{3}{4}$	$2\frac{1}{4}$	212	31/4	3 5/8	4 3/8					

#### RETURN BENDS, CLOSE, TAPPED ON PITCH

		-			-				
SizeInches Length of Pipe in Coil Feet		1 4	$\frac{1}{5}$	1 6	7	8	1 1/4 4	1 1/4	1 1/4
Price Price, Right and Left	. 26	.26	.26	.26	.26	.26	.33	.33	.33



PLATE D. RETURN BEND, WIDE PATTERN



DIATE E OFFEET

#### RETURN BENDS, WIDE PATTERN

Size . In. 34 C. to C 6	1 3	1 4	$\frac{1}{4\frac{1}{2}}$	1 5	6	1 7	1 8	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1 ½ 6	8	2 5	6
Blk Ea60 Galv . Ea. 1.10	.45 .80	.50	.55	.60 1.10	.75 1.30	.90 1.45	1.00 1.60	1.00 1.75	1.15 1.90	$\frac{-1.25}{2.00}$	$\frac{2.75}{5.30}$	$\frac{1.30}{2.30}$	${1.60}$ $\frac{2.60}{2.60}$	$\frac{-}{2.00}$ $\frac{3.25}{}$	$\frac{1.75}{3.00}$	$\frac{2.00}{3.25}$

#### OFFSETS

SizeInches	34	1	1 1/4	$1\frac{1}{2}$	2	2 1/2	3	3 1/2	4	5	6
To offset 4 inch Each To offset 6 inch Each To offset 8 inch Each	.67	1.05	1 50	1 80	2 70	4 50	6 00	7 50	0 00	19 00	15 00



## CAST IRON FITTINGS







PLATE A CAP

PLATE B. REDUCER

PLATE C. LOCKNUT

SizeInches	1	1 1/4	1 1/2	2	$2\frac{1}{2}$	3	3 ½	4	4 1/2
Caps, Cast IronEach Reducers, Cast IronEach Locknuts, Cast IronEach					.60	.80	1.00	1.30	1.80
SizeInches	5	6	7	8	9	10	12	14	15
Caps, Cast IronEach Reducers, Cast IronEach Locknuts, Cast IronEach	9 00	9 70	5 35	6 75	8 30	10.00	15.00	30.00	TTU . UU



### BUSHINGS



PLATE D. BUSHING

PLATE E. BUSHING, FACED

SizeInches	3/8	1/2	34	1	11/4	1 1/2	2	$2\frac{1}{2}$	3	3 1/2	4
BushingsEach Faced BushingsEach	.04	.04	.05	.06	.07	.09	.14	.21	.30	$\frac{.40}{1.20}$	$1.50 \\ 1.50$
Size Inches	4 1/2	5	6	7	8	9	10	12	14	15	
BushingsEach	$\frac{-75}{2.10}$	.93	$\frac{1.25}{3.75}$	1.87	$\frac{2.75}{8.25}$	$\frac{3.25}{9.75}$	3.75	5.00	12.50	16.00	

# MALLEABLE UNIONS WITH LIP



PLATE F

SizeInches													
BlackEach Galvanized.Each	.18	$^{.18}_{.27}$	$\frac{.20}{.30}$	.22	.27 .40	.33 .50	·46 ·70	.58 .90	1.15	$\frac{1.55}{2.35}$	$\frac{2.10}{3.15}$	$\frac{3.65}{5.50}$	$\frac{4.35}{3.50}$



## CAST IRON FITTINGS



PLUGS



PLATE A. PLUG

PLATE B. COUNTERSUNK

Size	. Inch	es 1	8 1	4	3/8	1/2	34	1	1	1.1	4 1	1/2	2	23	3
Plugs, Countersunk. Plugs, Solid Plugs, L. H	Eac	eh		04	04	04	.06	3	08	.0	$\frac{9}{9}$ .	11	, 15	1.30	.40
SizeInches	3 1/2	4	$4\frac{1}{2}$	5	6	7		8	1	9	10	1:	2	14	15
Plugs Each Plugs, Solid Each	.38	.42	.65 1.00	.88 1.35	1.20	1.	85 2 80 4	.75	3.	25 00	3.75 5.75	5.0	00 1	2.50	15.00



PLATE C LONG SCREW WITH SOCKET AND FOLLOWER



PLATE D FOLLOWER



PLATE E SOCKET

Size	Black	Galv.		]	Extra	Long I	Black L	ong Scre	ews, Inc	ches	
Inches			4	5	6	7	8	9	10	11	12
14	.30	.35	.32	.34	.36	.38	.40	.42	. 44	. 46	.48
3 8	. 35	.40		. 37	. 40	.42	. 44	. 46	.48	.50	.52
34	. 40	. 50		. 42	. 44	. 46	.48	. 50	.52	. 54	.56
34	. 55	. 66			. 64	. 68	.72	. 76	.80	.84	.88
1	.75	1.00			. 79	. 83	. 87	. 91	.95	.99	1.03
1 14	1.00	1.25				1.04	1.08	1.12	1.16	1.20	1.24
112	1.30	1.60				1.34	1.38	1.42	1.46	1.50	1.54
2	1.70	2.10					1.80	1.90	2.00	2.10	2.20
212	2.70	3.10					2.80	3.00	3.20	3.40	3.60
3	3.70	4.70					3.90	4.10	4.30	4.50	4.70
3 12	5.40	6.75						5.63	5.87	6.11	6.35
-1	6.60	8.25							7 00	7 10	7 80

#### PER HUNDRED PIECES

SizeInches	1/4	3.8	1/2	34	1	114	1 1/2	2	2 1/2	3	31/2	4
Sockets	6.60	8.00	9.40	10.80	19 90	91.00	0 = 10	20.00	00.00	100.00	1 40 00	

Long Screws, longer than Standard, made to order and charged as Cut Pipe. Threads, Couplings and Lock Nuts extra.

### WROUGHT IRON COUPLINGS

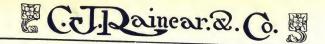
SizeI	nches	1/8	1/4	3/8	1/2	34	1	1 1/4	1 1/2	2	21/2	3
BlackGalvanized	Each Each	.05	.05	.06	.07	.10	.13	.17	.21	.28	.40	.60
SizeI	nches	$3\frac{1}{2}$	4	4 1/2	5	6	7	8	9	10	12	14
Black	Each Each	.80 1.05	1.00 1.40	$\frac{1.50}{2.00}$	$\frac{-}{1.65}$ $\frac{2.25}{2}$	$\frac{2.40}{3.25}$	3.25	4.25	5.50	7.50	10.00	18.75



# GALVANIZED CAST IRON FITTINGS.

SizeInches	1/4	3/8	1/2	34	1	1 1/4	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	3 1/2	4
		10	10	.16	.21	.32	.40	. 56	1.00	1.50	2 10	2.40
Elbows	.10	. 10	.12			.36	.46	.64	1.20	1.70	2.40	2.80
Elbows, Reducing		.12	. 14	.18	.24		.46		1.20	1.70	2.40	2.80
Elbows, R. & L		.12	.14	.18	.24	.36	.48	.68	1.20	1.80	2.50	2.90
Elbows, 45°	.12	.12	.14	. 20	. 24	.38	1 90	1.68	3.00	4.50	6.30	7.20
Elbows, Side Outlet.			.36	.48	.60					2.20	3.00	
Tees	.16	.16	.18	.24	.30	.46	. 58				3.50	
Tees, Reducing		.18	. 20	.28	.34	. 54	.66					10.50
Tees, Side Outlet			.54	.72	. 90	1.40	1.80	2.50	4.50	0.00	9.00	10.00
								0 00	0.00	0 00	10.00	19 00
Tr 4 - Cf 4 in about				.90	1.40	2.00	2.40	3.60	6.00	8.00	10.00	19 00
To set off 6 inches.				1.34	2.10	3.00	3.60	5.40	9.00	12.00	15.00	01.00
To set off 6 inches. To set off 8 inches.	1111									16.00	20.00	24.00
				. 50	. 60	. 92	1.20	1.66	2.90			
Reducers												
Bushings			0.8	. 10	.12	.14	. 18	.28	. 1.			
Plugs	0.1	0.4	04	06	.08		. 14	. 20	. 36			
Plugs	.04	.04	08	.12	.16	. 18	.22	.30	.60	.80		1
Plugs, Counter-sunk Caps			1.00						.80	1.08		1.74
Flange Unions, St'd.			1.60	0.2	1 04	1 28	1 56	2.00	2 .50	3.00	3.60	4.20
Flange Unions, St d.			1.00	. 32	1.04	1.20	1.00					
Return Bends:	1		20	10	4.4	. 56	80	1 14	2.40	3.40	7.20	9.00
Close			.30	.40		. 50	1 16	1.60				10.50
Open				.02		1.20	1 60	9 30				
Back Outlet					.04	1 20	1.00	0 66				
Side Outlet				.88	.96	1.38	1 96	1 90				
Y's			.40	.56		1.08	1.0	0 0 16				
V'e Doducing	1		. 46	60	.80	1.24	1.0.	2.10				
Lock Nuts									.54	. 08	. 95	1.20

SizeInches	4 1/2	5	6	7	8	9	10	12	14
Elbows	3.50	4.00	5.50	9.40	13.50	18.00	$\frac{27.00}{31.00}$		$114.00 \\ 126.00$
Elbows, Reducing	4.00	4.60			15.50				
Elbows, R. & L				11 00	17 00	22 50	24 00	50.00	
Elbow, 45°	4.40	5.00	6.90	11.80	17.00	22.00			
				19 60	19.50	26 00	30 00	58.00	
Tees	5.10		8.00	15 60	22.00	30.00		67.00	
Tees, Reducing	5.90	7.00	9.20	15.00	22.00	30.00			
Tees, Side Outlet	5.30	18.00	24.00						
Offsets:		10 00	00 00			1			
Offsets: To set off 4 inches To set off 6 inches		16.00	20.00						
To set off 6 inches To set off 8 inches		24.00	40.00						
		32.00	40.00	04 50	35.00	17 00	70.00	105.00	220.00
Crosses	9.20	11.00	16.00	24.00	138 50	59 00		116.00	240.00
Crosses, Reducing	10.20	12.00	10.00	10.70	13.50	16 70			
Reducers		4.00			5.5.50	6 50			25.00
Bushings		$\frac{1.85}{1.75}$				6.50			
Plugs	1.30								
Plugs, Counter-sunk		9 40		5 00	5 70	9 50	11.00	14.00	38.00
Caps		2.40	7 0	11 00	14.00	20 00	23.00	32.00	)
Flange Unions, St'd	5.40	6.30	1.9	111.00	11.00	20.00	20.00	1	
Return Bends: Close	1.4 0	01 5	27 0				1		
Open	14.00	21.0	27.0						
Open Back Outlet	14.00	1 22.0	9 21.0						
Side Outlet									
Y's, Reducing	11.8	0 14.0	0 21 2	0 36 0	0 59 00	70.00	103.00	154.00	)
Y's, Reducing Lock Nuts	. 13.0	0 10.0	0 21.2	0 3 4	0 4 70	5 40	6.00	8.00	14.00
Lock Nuts	. 1.6	0, 1.8	0 2.0	0, 0.4	U I. (	0.10	0.00		



# THE NOKOROS PATENT UNION.

ABSOLUTELY NON-CORROSIVE, BRASS TO IRON AT ALL CONTACT POINTS.



PLATE A

SizeInches	18	1/4	3/8	1,	3,	
Plain Each Galvrnized Each	.18	.19	.22	.27	.40	.48
SizeInches	1 1/4	1 1/2	2	21/2	3	1
PlainEach GalvanizedEach	$\begin{array}{c} \cdot 66 \\ \cdot 82 \end{array}$	.80 1.10	1.14	$\frac{2.10}{2.75}$	2.65 3.50	

# FLANGE UNIONS.



PLATE B

# STANDARD FLANGE UNIONS, CAST IRON

SizeInches	1/2	34	1	1 1/4	1 1/2	2	21/2	3	314
PriceEach .	40	. 46	. 52	. 64	.78	1.00	1.25	1 50	1 80
- Inches	*±	4 1/2	Э	6	7	8	9	10	12
PriceEach 2.	10	2.70	3.15	3.95	5.50	7.00	10.00	11.50	16.00



### ECCENTRIC REDUCING COUPLINGS



#### PLATE /

2 ½ x 1 ¼	2 ½ x 1 ½	2 ½ x 2	3 x 2	3 x 2 ½	3 ½ x 3
1.50	1.50	1.50	2.40	2.40	3.00
3 ½ x 2 ½	4 x 3 ½	4 x 3	5 x 4	6 x 4	
3.00	4.00	4.00	6.00	8.00	
	1.50 3 ½ x 2 ½	1.50 1.50 3 1/4 x 2 1/2 4 x 3 1/2	3 ½ x 2 ½ 4 x 3 ½ 4 x 3	$1.50$ $1.50$ $1.50$ $2.40$ $3 \frac{1}{2} \times 2 \frac{1}{2}$ $4 \times 3 \frac{1}{2}$ $4 \times 3$ $5 \times 4$	1.50 1.50 1.50 2.40 2.40 3 \(\frac{1}{2}\) x 2 \(\frac{1}{2}\) 4 x 3 \(\frac{1}{2}\) 4 x 3

# ECCENTRIC BUSHINGS REDUCING TWO OR MORE SIZES



PLATE E

	-						_							
SizeInches	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10	12	14
Price	. 27	. 50	.60	.80	1.00	1.50	1.85	2.50	3.75	5.50	6.50	7.50	10.00	25.00

All Bushings, right and left, or left hand, double above prices.

### CAST IRON RICHT AND LEFT COUPLINGS



PLATE C

SizeInches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Price Each Price, Galvanized Each	.07	.08	.11	.15	.20	.25 .50	.30	. 50 1.00	.85 1.70	$\frac{1.20}{2.40}$	2.00 4.00



# CAST IRON FLANGES.







PLATE B OVAL FLANGE.



PLATE C SOLID FLANGE.

Y	=		-	1	-	-		=	-	-	=	_	-	7	-		_	-	_	-		=		_	_	-		_	_	_	_	-	=	_	-										
In.	1	8		1	2		34			1		1	1	4	1	1/2		$^2$	1	2	1/2		3	1	3	2				11		5		(	3	1	7			8		(	)		10
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	. 3				5		.3			.3			.30			30		35																											
5 1/2					5		.4			.4			.40			10		35		ż	iò																								
	. 5				0		.5			$\overline{4}$			40			10		42			2		50																						
6 12				.6	5		.6			.6			.60			55		50			50		50																						
7		٠.		. 7	5		. 7	5		.7	5		.70	0		70		62			32		62																						
$7\frac{1}{2}$				.9	0		.9	0		.9	0		8	5	. 8	35		.80		.8	30		75		.8						I.	Ċ							1		ì				
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### BRANCH TEES.



END OUTLET,

PLATE D



BACK OUTLET IN CENTER.

over a constitution



PLATE F

CENTER SIDE OPENING.

No. of Branches	1 2 1	3   4	5	6	7	8	9	10	11	12   13
								10	11	12   10
Size Br. Size Run										
Inches Inches		1								
1 1 or 1 1/4	. 90 1	051.15	1.35	1.60	1.90	2 20	2.65	3 15	3 75	4.40 5.0
1 $1\frac{1}{2}$	1.001	.151.30	1.45	1.75	-2.20	2.45	2.90	-3.30	4 50	4 75 5 5
1 2	1.151.	.35[1.60]	1.85	2.10	2.45	2.75	3.40	-4.00	4 80	5 10 6 0
1 2 1/2	1.752.	0.052.40	2.75	3.10	3.50	3.75	4.30	5.00	5.50	5.85 6.3
1 1/4 1 1/4 or 1 1/2	1.301.	652.00	2.40	2.80	-3.20	3.60	4.30	4.80	5 00	5 25 6 0
$1\frac{1}{4}$ 2	1.501.	.902.40	2.90	3.30	3.90	4.50	5.25	5.85	6.25	6.50 7.0
1 1/4 2 1/2	1.952.	402.85	3.55	3.95	4.20	4.95	6.15	6 85	7 95	7 65 8 9
1 ½ 1½ or 2	2.102.	703.35	4.00	4.65	5.25	5.85	6.50	7.60	8.00	8.50 9.5
1 1/2 2 1/2	2.853.	454.15	5.00	5.75	6.50	7.00	8.25	9.25	9.75	10.5011.5
1 1/2 3	3.153.	804.60	5.50	6.25	7.25	7.75	9.00	10.00	10.75	11.50 12.7
2 2 2 1/2	4.105.	256.40	7.65	8.80	10.60	11.50	12.25	13.50	14.25	15.00 16.0
2 2 1/2	4.005.	757.00	8.50	9.75	11.75	12.75	13.50	15.00	15.75	16.50 17.5
2 .)	4.500.	797.00	8.50	9.75	11.75	12.75	13.50	15.00	15.75	16.5017.5

Branch Tees with back outlet, use next higher list.



# HOOK PLATES, COIL STANDS, ETC.



PLATE A HOOK PLATE.



PLATE B EXPANSION PLATE.



PLATE C RING PLATE.



PLATE D COIL STANDS.

Number of Branches	1	2	3	4	5	6	7	8	9	10	11 1:
34 inch Hook Plates	.08	. 16	. 21	. 24	. 28	. 34	. 40	.45		. 56	.68
inch Hook Plates	.10	.21	. 27	39	41	59	.48	. 59	. 65	70	. 85 1 . ( 1 . 35 1 . 4
1½ inch Hook Plates 2 inch Hook Plates	. 15	. 28	. 43	.58	79	.88	1.10	1.25	1.40	1.55	1.651.9
% in. Exp. Hook Plates	14	23	3.4	45	5.5	. 65	.77	. 90	1.05	1.25	1.451.6
in. Exp. Hook Plates.	17	2.7	40	60	70	.70	.80	. 95	1.10	1.35	1.551.7 $1.702.0$
1½ in. Exp. Hook Plates. 1 inch Ring Plates	. 25	. 40	. 60	7.5	. 90	1.00					
1 1/4 inch Ring Plates	. 21	.35	. 50	62	.75	1.10	1.25	$\frac{1.00}{1.40}$	1.20	1.30	

## HOOK, EXPANSION AND RING PLATES-SINGLE.



Size PipeInches	34	1	1 1/4	1 1/2	2	21/2	3
Hook Plates, Single Each Expansion Plates, Single. Each	.08	.09	. 10	.15	.22	.30	.40
Ring Plates, Single Each	16	. 16	.21	.25			

#### FLOOR AND CEILING PLATES.



PLATE F



PLATE G CEILING PLATE.

SizeInches	1/4	38 1/2	34	1	1 14 1 1 2	2 2 1/2	3	3 1/2	4	41/2	5	6
Floor Plates Each Ceiling Plates Each		00	06	08	11 14	16 94	20	0.5				



PLATE H GAS PIPE HOOKS.



PLATE I PIPE STRAPS, TINNED.

SizeInches	1/4	3/8	$\frac{1}{2}$	3.4	1	1 1/4	1 1/2	2	14, 38,	1/2, 3/4, 1 1/4, 1 1/2 and 2 ins.
Price . Per 100	.45	. 55	. 65	.80	1.00	1.30	1.60	2.00	Price.	Per Pound 18



# WROUGHT IRON NIPPLES THREADED RIGHT HAND





PLATE A SHOULDER NIPPLE.

PLATE B CLOSE NIPPLE.

In Effect October 7th, 1899.

	Length	in Inches	Sizes	Pr	ices	Length Ex. 1.	and ong N	Prices lipples
Close	Short	Long	Dizes	Close or Short	Long	4	5	6
3/4	1 1/2	$2  2 \ \frac{1}{2}  3  3 \ \frac{1}{2}$	1.8	.04	.06	.07	.08	.10
7/8	1.12	$2  2 \mid \frac{1}{2}  3  3 \mid \frac{1}{2}$	1/4	.04	.06	.07	.08	.10
1	11/2	$2  2 \frac{1}{2}  3  3 \frac{1}{2}$	3 8	.04	.06	.07	.08	.10
$1^{1}$ s	1 1/2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 2	.05	.07	.08	.10	.12
1 3/8	2	$2 \begin{array}{cccccccccccccccccccccccccccccccccccc$	34	.06	.09		. 11	.13
$1\frac{1}{2}$	2	$2 \frac{1}{2} 3 3 3 \frac{1}{2} 4$	1	.08	.13		. 1.5	.18
1.5%	2 12	3 3 1/2 4 4 1/2	134	. 11	.17		. 20	. 24
$1\frac{3}{24}$	$2\frac{1}{2}$	3 3 1/2 4 4 1/2	$1\frac{1}{2}$	.13	. 20		. 25	. 29
2	2 1/2	3 3 1/2 4 4 1/2	2	.18	.27		.32	.38
$2 \frac{1}{2}$	3	3 1/2 4 4 1/2 5	2 1/2	.39	. 59			. 68
$2\frac{1}{2}$	3	3 1/2 4 4 1/2 5	3	. 48	.72			.85
$2\frac{3}{4}$	4	4 1/2 5 5 1/2 6	3 1/2	.75	1.05			
3	4	4 1/2 5 5 1/2 6	4	.85	1.20			
3	4	$4 \frac{1}{2} 5 \qquad 5 \frac{1}{2} 6$	4 1.2	1.25	1.70			
$3\frac{1}{2}$	4 1 2	$5  5\frac{1}{2}  6  6\frac{1}{2}$	5	1.55	2.45			
$3^{1}\hat{2}$	4 15	5 512 6 612	6	1.85	2.90			
4	5	6	7	3.20	3.60			
4	5	6	8	3.55	4.05			
5	6	8	9	5.25	6.50			
5	6	8	10	6.75	8.25			
5	6	8	12	8.00	10.00			

Note.—Nipples longer than six inches are not regularly kept in stock, but are cut to order only. Prices will be based on the price of Pipe with charges for cutting and threading added. List prices of Extra Heavy Nipples will be three times the list of regular nipples.



# WROUGHT IRON NIPPLES THREADED RIGHT AND LEFT

	Lei	ngth i	n Incl	ies		Sizes	Pri	ces	Lengtl Ex. L	n and ong N	Prices Ipples
Close	Short		Lo	ong			Close or Short	Long	4	5	6
344 78 1 1 18 1 1 38 1 1 15 1 34 1 2 12 2 2 34 3	1 1/2 1 1/2 1 1/2 2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 3 3 4 4	2 2 2 2 2 1/2 2 2/2 2/2 3 3 3 4 1/2 4 1/2	2 1/2/2 2 1/2/2 2 1/2/2 3 3 1/2/2 3 1/2/2 4 4 5 5	3 3 3 3 3 3 3 4 4 4 4 4 5 5 5 5	333122 4 4 1/2/2 4 5 5 6 6	1.8 3.8 1.6 3.4 1.1/2 2.1/2 3.	.05 .05 .05 .07 .08 .11 .15 .18 .24 .52 .65	.08 .08 .08 .10 .12 .18 .23 .27 .36 .79 .96 1.40		.11 .11 .13 .15 .20 .27 .34 .43	. 13 . 15 . 13 . 16 . 17 . 24 . 32 . 39 . 51 . 91

Add 60 per cent. to above prices for galvanized nipples threaded right and left. Note.—Nipples longer than six inches are not regularly kept in stock, but are cut to order only. Prices will be based on the price of Pipe with charges for cutting and threading added. List prices of Extra Heavy Nipples will be three times the list of regular nipples.

# WROUGHT IRON GALVANIZED NIPPLES THREADED RIGHT HAND

	Ler	igth i	n Incl	ies		Sizes	Pric	ces	Length Ex. L	and ong N	Prices ipples
Close	Short		Lo	ong		7. 1.0(1)	Close or Short	Long	4	5	6
3.7% 1 3 4 5 3 1 1 2 2 2 2 2 3 3 3 3 4 4	1 1/2 1 1/2 1 1/2 2 1/2 2 1/2 2 2 1/2 2 2 1/2 2 3 3 4 4 4 1/2 5 5	22 22 22 22 22 22 23 33 33 44 44 45 56 66	222222 3333344555555	33 3 3 3 4 4 4 4 4 4 5 5 5 5 6 6	3 1/2 3 1/2 3 1/2 3 1/2 4 4 1/2 5 5 6 6 6 6 1/2 6 1/2	1 1452 15 12 15 15 16 7 8	.06 .06 .06 .08 .01 .11 .17 .21 .27 .56 .70 1 .20 1 .35 1 .85 2 .30 4 .25 5 .00	.11 .11 .11 .11 .14 .19 .29 .35 .47 .83 1.10 1.87 2.60 2.60 3.15 4.25 4.95 5.80	.12 .12 .12 .13	.15 .15 .15 .16 .18 .24 .32 .39 .52	.17 .17 .17 .18 .21 .28 .38 .46 .61 1.00 1.30

Note.—Nipples longer than six inches are not regularly kept in stock, but are cut to order only. Prices will be based on the price of Pipe with charges for cutting and threading added. List prices of Extra Heavy Nipples will be three times the list of regular nipples.



# CAST IRON LONG TURN FITTINGS.

#### SCREWED



NO. 1. WATER ELBOW



PLATE B
NO. 2. DOUBLE BRANCH WATER ELBOW

#### WATER ELBOWS-SCREWED

Size Inches	1	1 1/4	1 1 2	2	$2\frac{1}{2}$	3	3 1/2	4
No. 1 Each	.32	.40	. 55	.80	1.20	2.25	3.25	3.50
No. 2, Each	. 64	.80	1.10	1.60	2.40	4.50	6.50	7.00
Size Inches	4 1/2	5	6	7	8	9	10	12
No. 1 Each	5.50	6.50	8.75	13.00	17.00	25.50	30.00	40.00
No. 2 Each	11.00	13.00	17.50	26.00	34.00	51.00	60.00	80.00



PLATE C
NO. 3. WATER TEE, SINGLE SWEEP



PLATE D No. 4. WATER CROSS

#### WATER TEE AND CROSS-SCREWED

SizeInches	1	1 1/4	1 1 2	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	-4
No. 3 Each	. 48	. 60	.82	1.20	1.80	3.40	4.90	5.25
No. 4 Each	.85	1.10	1.50	2.15	3.20	6.00	8.75	9.50
SizeInches	4 1/2	5	6	7	8	9	10	12
No. 3 Each No. 4 Each		9.75 17.50	13.25 24.00	19.50 35.00	$25.50 \\ 45.00$	38.00 68.00	45.00 80.00	60.00 107.00



### CAST IRON LONG TURN FITTINGS. SCREWED







NO. 5. WATER TEE, DOUBLE SWEEP

NO. 6. SWEEP CROSS

SWE	EP T	EE A	ND C	ROSS	SCRE	WED		
SizeInches	1	1 1/4	1 1/2	2	212	3	$3\frac{1}{2}$	4
No. 5 Each	.64	.80	1.10	1.60	2.40	4.50	6.50	7.00
No. 6 Each	.85	1.10	1.50	2.15	3.20	6.00	8.75	9.50
SizeInches	4 1/2	5	6	7	8	9	10	12
No. 5 Each	11.00	13.00	17.50	26.00	34.00	51.00	60.00	80.00
No. 6Each	15.00	17.50	24.00	35.00	45.00	68.00	80.00	107.00

These fittings are made in reducing sizes by filling up ends, thus avoiding the use of screwed bushings.

For Reducing Sizes add 50% to the above list. For Galvanized Fittings double the above list.

#### EXTRA LONG TURN ELBOW. SCREWED



	TE (

			1					
SizeInches	1	1 1/4	1 ½	2	21/2	3	3 1/2	4
Each	.50	.70	.90	1.20	2.00	3.00	4.00	5.00
SizeInches	412	5	6	7	8	9	10	12
Each	7.00	9,00	13.00	20.00	26.00	31.00	40.00	60.00



WORKING PRESSURES UP TO 125 POUNDS



PLATE A



PLATE B

Size	Faced Only	Faced and Drilled	Centre To Face	Diameter Of Flange	Faced Only	Faced and Drilled	Centre To Face
2	4.75	5 75	41/2	6	5 25	6 25	21/2
21/2	5 00	6 25	5	7	5 50	6 75	3
3	5.75	7.00	51/2	71/2	6 25	7 50	3
31/2	6.50	7.75	6	81/2	7.25	8 50	31/2
4	7.25	9.25	6 1/2	9	8 00	10 00	4
41/2	9.00	11.00	7	914	10 00	12 00	4
5	9.75	11.75	71/2	10	10 75	12 75	41/2
6	12.00	14.00	8	11	13 00	15 00	5
7	16 00	19 75	81/2	121/2	16.00	19.75	51/2
8	20.00	23.75	9	13,1/2	20 00	23.75	51/2
9	26.00	30.00	10	15	26 00	30.00	6
10	32.00	36.00	11	16	32.00	36 00	61/2
12	44.00	50.00	12	.19	44.00	50.00	71/2
14	58.00	65 00	14	21	58.00	65.00	71/2
15	72.00	80.00	141/2	22.14	72.00	80.00	8
16	84.00	93.00	15	231/2	84.00	93.00	8
18	108.00	118.00	161/2	25	108.00	118.00	81/2
20	135.00	148.00	18	271/2	135.00	148.00	91/2
24	200.00	220.00	22	32	200.00	220.00	11

All fittings furnished FACED ONLY unless otherwise specified. We can furnish the above fittings in semi-steel or cast steel. Prices on application.

WORKING PRESSURES UP TO 125 POUNDS



PLATE A



PLATE B REDUCING TEE

			1				1	1		
Size	Faced	Faced	Cent'e	Cent'e	Dia.	Faced	Faced	Centre to	Centre	Size
	Only	Drilled	Face of Run	Faceof	Flgs	Only	Drilled	Face of Run	Face of Outlet	Outlet
2	7.00	8.50	41/2	41/2	6	8.00	9.50	suo 4½	these of 27,2	
21/2	7.25	9.00	5	5	7	8.25	10.00	run. mensi t fitti	sion 2	
3	8.25	10.00	51/2	51/2	7 1/2	9.50	11 25	on in run. If nese dimensions straight fittings 9 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	cases dimensions	
31/2	9.50	11 25	6	6	81/2	11.00	12 75	on i esc strai	s din	
4	10.50	13 50	61/2	61/2	9	12.00	15 00			
41/2	13.00	16.00	7	7	91/4	15.00	18.00		column or other cases	
6	14.25	17-25,	7 1/2	7 1/2	10	16.25	19 25			
6	17.50	20.50	8	8	11	20 00	23 00	changed umn or asses din	In all	
7	23.00	28.75	81/2	81/2	121/2	26 50	32 00	in last column or All other cases dim	given in last outlet. In a co coutlet	
8	29.00	34 75	9	9	131/2	33 50	39.00	not t co her 6	give of or	
9	38.00	44.00	10	10	15	43.50	50.00	are not in last co	centre to face of outlet.	
10	46.50	52.50	11	11	16	53.50	60.00	Al an B	face to t	6
12	64.00	73.00	12	12	19	74 00	83.00	ensions given run.	utlet to the	. 8
14	84.00	95.00	14	14	21	96.00	107.00	E 22 2 2 11	ntre n	9
15	105.00	117.00	141/2	141/2	22 1/4	120.00	132.00	a 20 0 11 1/2	n o o o o	9
16	122.00	135.00	15	15	231/2	140.00	153.00	15 5 tet	tings 14	10
18	155.00	170.00	161/2	161/2	25	178.00	193.00	s out	When fittings have outlet nisions govern centre to fattings govern centre to fattings govern centre to fattings	
20	195.00	215.00	18	18	271/2	225.00	245.00	Centre g has in cen	When sion ht fi	
24	290.00	320.00			32	335.00	365.00	Centre to far fitting has outlet govern centre to govern centre to	When dimensions straight fitt	<b>.</b>

All fittings furnished FACED ONLY unless otherwise specified. We can furnish the above fittings in semi-steel or cast steel.



WORKING PRESSURES UP TO 125 POUNDS.



PLATE A CROSS.



PLATE B CROSS, REDUCING.

Size	Faced Only	Faced and Drilled	Cent'e to Face of Run	to Face of	Dia. of Flgs	Faced Only	Faced and Drilled	Centre to Face of Run	Centro to Face of Outlet	Size of Outlet
2	9.50	11.50	41/2	41/2	6	11.00	13.00	H sg 41/2	these of 4½	
21/2	10.00	12.50	5	5	7	11.50	14.00	run. mensic t fittir 2	th the	,
3	11.50	14.00	51/2	51/2	71/2	13.25	15.75	ight ight 1	aller 5½	
31/2	13.00	15.50	6	6	81/2	15.00	17.50	ese traig	ms 6	
4	14.50	18.50	61/2	61/2	9	16.75	20.75	reductions aller, these sions of stra	oases dimensions of 2/3	
41/2	18.00	22.00	7	7	91/4	20.75	25.00	are not changed by reductions in run. If ast column or smaller, these dimensions all other cases dimensions of straight littings 0 6 8 8 4 2 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	ther cases dimension to the column or smaller, 5 % 6 % 7 % 7 % 7 % 7 % 7 % 7 % 7 % 7 % 7	
5	19.50	23.50	71/2	71/2	10	22.50	26.50		last colur all other	
6.	24.00	28.00	8	8	11	27.50	31.50	changed lumn or cases din		
7	32.00	39.50	81/2	81/2	121/2	37.00	45.00	case 81/2	- F 81/	
8	40.00	47.50	9	9	131/2	46.00	53.50	st co	given utlet. of out	
9	52.00	60.00	10	10	15	60.00	68.00	are in lass all of	size giver of outlet. face of ou	
10	64.00	72.00	11	11	16	74.00	82.00		716 5 6 of	6
12	88.00	100.00	12	12	19	100.00	112.00	dimensions size given of run. In of run.	fittings have outlet of govern centre to face tings govern centre to face tings for 11 12 13 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	8
14	116.00	130.00	14	14	21	132.00	146.00	dimensio size give of run.	o attre	9
15	144.00	160.00	141/2	141/2	221/4	165.00	180.00		gs have in central govern 13 1/3	9
16	168.00	186.00	15	15	23 1/2	193.00	210.00	tlet of tace to face to face to face to face 117	tings veri	10
18	216.00	236.00	161/2	161/2	25	248.00	268.00	s out	When fittings have outlet of nations govern centre to face that fittings govern centre to a state of the stat	
20	270.00	296.00	18	18	27 1/2	310.00	335.00	Centre g has en cent	When sior ht f	
24	400.00	440.00	22	22	32	460.00	500.00	Centre to face fitting has outlet of govern centre to face govern centre to face 1.11 c 1.11	When dimensions straight fitt	

All fittings furnished FACED ONLY unless otherwise specified. We can furnish the above fittings in semi-steel or cast steel. Prices on application.



WORKING PRESSURES UP TO 125 POUNDS.

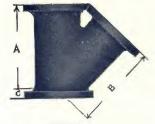


PLATE A STANDARD Y'S.



PLETE B REDUCING Y'S.

Size	Faced Only	Faced and Drilled	A or B	and C	A	Dia. of Flgs	Faced Only	Faced and Drilled	A or B		A and C		A
2	9.50	11.50	8	10 1/2	$2\frac{1}{2}$	6	11.00	13.00	8	pt	$10\frac{1}{2}$		$2^{1}_{2}$
$2^{1}$ <sub>2</sub>	10.00	12.50	$9\frac{1}{2}$	12	$23_{2}$	7	11.50	14.00	9 1/2	except tion.	12		2.12
3	11.50	14.00	10	13	3	$7\frac{1}{2}$	13.25	15.75	10	h, e	13	n.	3
$3  {\rm L}_2'$	13.00	15.50	$11\frac{1}{2}$	$14\frac{1}{2}$	3	81/2	15.00	17.50	11 ½	or branch, exe	$14\ \frac{1}{2}$	column.	3
4	14.50	18.50	12	15	3	9	16.75	20.75	12	or bu	15		3 =
415	18.00	22.00	$12.1_{2}$	$15\frac{1}{2}$	3	91/4	20.75	25.00	121/2	un c	$15^{1}_{2}$	ding	3 3
5	19.50	23.50	13 ½	17	3 1/2	10	22.50	26.50	13 1/2	in run or branch, given on applicat	17	Same as preceding	3 12 5
6	24.00	28.00	14 1/2	18	3 1/2	11	27.50	31.50	14 1/2	ion I be	18	s bi	3125
7	32.00	39.50	16 12	20 ½	-1	12 1/2	37.00	45.00	16.12	changed by reduction in	20 1/2	ne a	3 12 suipesetu 3 12 est
8	40.00	47.50	17 1/2	22	$4\frac{1}{2}$	13 1/2	46.00	53.50	17 34	recions	22	San	4 1/2 2
9	52.00	60.00	19 1/2	24	$4\frac{1}{2}$	15	60.00	68.00	19 1/2	t by	24	3	4 1 2 3 5 %
10	64.00	72.00	20 1 2	251/2	5	16	74.00	82.00	20 1 2	din	$25^{+2}$	Note-	5
12	88.00	100.00	24 1/2	30	5 1/2	19	100.00	112.00	24 12	chan	30		5 1 2 E C N
14	116.00	130.00	27	33	6	21	132.00	146.00	27		33		6 8
15	144.00	160.00	28 1/2	34 1/2	6	22 1/4	165.00	180.00	28 1/2	ions are not cases when	34 12		6
16	168.00	186.00	30	36 1/2	6 1/2	23 1/2	193.00	210.00	30		36 12		612
18	216.00	236.00	32	39	7	25	248.00	268.00	32		39		7
20	270.00	296.00	35	43	8	27 1/2	310.00	335.00	35	Dimens extreme	43		8
24	400.00	440.00	40 1/2	4912	9	32	460.00	500.00	40 12	D EXI	49 1/2		9

All fittings furnished faced only unless otherwise specified. We can furnish the above fittings in semi-steel or cast steel. Prices on application.

WORKING PRESSURES UP TO 125 POUNDS.

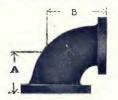


PLATE A
REDUCING ELBOW.

Size, Inches	Price Faced	Price Faced and Drilled	Cen- tre to Face, Inches	Diameter of Flanges, Inches	Size, Inches	Price Faced	Price Faced and Drilled	Cen- tre to Face, Inches	Diameter of Flanges, Inches
3 x1½	11.50	14.00	$5\frac{1}{2}$	7 ½x 5	8x 4	40.00	47.50	9	13½x 9
3 x2	11.50	14.00	$5\frac{1}{2}$	7½x 6	8x 5	40.00	47.50	9	13½x10
3 x2½	11.50	14.00	$5\frac{1}{2}$	7½x 7	8x 6	40.00	47.50	9	13½x11
3 ½x2 ⅓	13.00	15.50	6	8½x 7	9x 8	52.00	60.00	10	15 x13
3,4x3	13.00	15.50	6	8½x 7½	10x 5	64.00	72.00	11	16 x10
i x2	14.50	18.50	$6 \substack{1 \\ \cdot 2}$	9 x 6	10x 6	64.00	72.00	11	16 x11
4 x2½	14.50	18.50	$6\frac{1}{2}$	9 x 7	10x 8	64.00	72.00	11	16 x13
4 x3	14.50	18.50	$6\frac{1}{2}$	9 x 7½	10x 9	64.00	72.00	11	16 x15
5 x2½	19.50	23.50	$7\frac{1}{2}$	10 x 7	12x 6	88.00	100.00	12	19 x11
5 x3	19.50	23.50	7 1/2	10 x 7 ½	12x 7	88.00	100.00	12	19 x12
5 x4	19.50	23.50	$7\frac{1}{2}$	10 x 9	12x 8	88.00	100.00	12	19 x13
6 x2½	24.00	28.00	8	11 x 7	12x10	88.00	100.00	12	19 x16
6 x3	24.00	28.00	8	11 x 7 ½	14x10	116.00	130.00	14	21 x16
6 x3 ½	24.00	28.00	8	11 x 8½	14x12	116.00	130.00	14	21 x19
6 x4	24.00	28.00	8 -	11 x 9	15x10	144.00	160.00	14 1/2	22¼x16
6 x5	24.00	28.00	8	11 x10	15x12	144.00	160.00	14 1/2	22 1/4×19
7 x5	32.00	39.50	8 1/2	12½x10	16x12	168.00	186.00	15	23½x19
7 x6	32.00	39.50	8 1/2	12½x11	16x14	168.00	186.00	15	23½x21
8 x3½	40.00	47.50	9	13 ½x 8 ½	16x15	168.00	186.00	15	23 ½x22 ½

Flanged Fittings will always be furnished faced only, unless otherwise ordered.

Flanged Taper Reducing Elbows not listed above will be made to order at special prices.

WORKING PRESSURES UP TO 125 POUNDS.



PLATE A
ELBOW, FLANGED.

Size Inches	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches	Center to Face of Base Inches	Diameter Flanges Inches	Size Base Inches
4	12.00	15.00	6 1 2	6 ½	9	6
$41_2$	15.00	18.00	7	6.34	91/4	6
5	16.25	19.25	7 1/2	7	10	7
6	20.00	23.00	8	7 1/2	11	7
7	23.50	32.00	81/2	8 1/4	$12\frac{1}{2}$	7
8	33.50	39.00	9	834	$13\frac{1}{2}$	9
9	43.50	50.00	10	9 1/2	15	9
10	53.50	60.00	11	10	16	9
12	74.00	83.00	12	10 ½	19	11
14	96.00	107.00	14	13 ½	21	11
15	120.00	132.00	$14^{-1}\frac{7}{2}$	14	221/4	11
16	140.00	153.00	15	1434	$23\frac{1}{2}$	11

Flanged fittings will always be furnished faced only, unless otherwise ordered.

20

24



# CAST IRON STANDARD FLANGED FITTINGS.

WORKING PRESSURES UP TO 125 POUNDS.



PLATE A LONG RADIUS FLANGED ELBOW.

42

48



PLATE B

							11200	JOLA
Size	Faced Only	Faced and Drilled	Centre to Face	Dia. of Flanges	Faced Only	Faced and Drilled	Face to Face	Standard Sizes
2	9 50	11.50	10	6	7.00	8 50	41/2	2 x 1½ and less
21/2	10 00	12.50	10	7	7.25 8.25	9 00	5 1/2	$2\frac{1}{2}$ x 2 and less 3 x $2\frac{1}{2}$ and less
3	11.50	14.00	12	71/2	9.50 10.50 13.00	11 25 13.50 16.00	6 1/2	3½x 3 and less 4 x 3½ and less
31/2	13.00	15.50	14	81/2	14.25	17.25	61/2	4½x 4 and less 5 x 4½ and less
4	14.50	18.50	14	9	17.50 23.00	20.50 28.75	8 8	6 x 5 and less 7 x 6 and less
4 1/2	18.00	22.00	14	91/4	29.00 40.00	34.75 47.50	9 131/2	8 x 4 and over 8 x 3½ and less
5	19.50	23.50	15	70	38.00 52.00	44.00 60.00	91/2	9 x 4 and over 9 x 3½ and less
6	24.00	28.00	16	11	46.50 64.00	52.50 72.00	10 151/2	10 x 5 and over 10 x 4½ and less
7	32.00	39.50	171/2	121/2	64.00 88.00	73.00 100.00		12 x 6 and over 12 x 5 and less
8	40.00	47.50	18	131/2	84.00 116.00	$95.00 \\ 130.00$	12½ 16½	14 x 8 and over 14 x 7 and less
9	52.00	60.00	ĩ8	15	105.00 144.00	117.00 160.00	13 20	15 x10 and over 15 x 9 and less
10	64.00	72.00	18	16	122.00 168.00	135.00 186.00	14 22	16 x10 and over 16 x 9 and less
12	110.00	120.00	281/2	19	155.00 216.00	170.00 236.00	15 22	18 x10 and over 18 x 9 and less
14	160.00	175.00	33	21	195.00 270.00	$215.00 \\ 296.00$	16 26	20 x12 and over 20 x10 and less
15	180.00	200.00	33	221/4	290.00 400.00	$320.00 \\ 440.00$	19½ 30	24 x12 and over 24 x10 and less
16	200.00	220.00	33	231/2				
18			36	25	We m	ake redu	cers wi	ith lengths differing

We make reducers with lengths differing from above both in regular and eccentric pattern.

All fittings furnished FACED ONLY unless otherwise specified. We can furnish the above fittings in semi-steel or cast steel. Prices on application.

27 1/2

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## STANDARD CAST IRON FLANGES.

WORKING PRESSURES UP TO 125 POUNDS.



CAST IRON, THREADED.



PLATE B
CAST IRON, BLANK.

Size Faced Only		Faced and Drilled	Outside Diameter	Faced Only	Faced and Drilled	
2	1.20	1.50	6	1.40	1.70	
21/2	1.40	2.00	7	1.60	2.20	
3	1.60	2.25	71/2	1.85	2.50	
31/2	1.80	2.50	81/2	2.10	2.80	
4	2.15	3.00	9	2.50	3.35	
41/2	2.50	3.35	91/4	2.90	3.75	
5.	2 80	3.65	10	3.25	4.10	
6	3.20	4.00	11	3.70	4.50	
7	4.35	5.75	121/2	5.00	6.40	
8	5 00	6.50	131/21	5.75	7.25	
9	6.75	8.25	15	7 75	9.25	
10	7 75	9.25	16	9.00	10.60	
12	10.50	12.50	19	14.00	16.00	
14	13.75	16.00	21	17.50	19.75	
15	18.00	21.00	221/2	22.50	25.50	
16	22.50	26.00	231/2	28.00	31.50	
18	27.50	31.00	25	33.00	36.50	
20	30.00	34.00	271/2	36.00	40.00	
24	41.00	46.00	32.	50.00	55.00	

We also make upon specification and at special prices cast steel and rolled steel flanges of the highest grade.



# STANDARD CAST IRON REDUCING FLANGES

WORKING PRESSURES UP TO 125 POUNDS



PLATE A REDUCING FLANGE.

Size	Faced Only	Faced and Drilled	Size	Faced Only	Faced and Drilled	Size	Faced Only	Faced and Drilled
2 x 7 2 x 7 2 x 8 2 x 8 3 x 8 3 x 8 2 x 9 2 x 9 3 x 9 3 x 9 3 x 9 4 x 9 4 x 10 4 x 10 4 x 10 4 x 10 2 x 11 2 x 11 2 x 11 2 x 11 3 x 11 3 x 11 3 x 11 3 x 11	2.40 2.70 2.70	11	5 x 16 6 x 16	4 75 4.75 4.75 6.50 6.50 7.50 7.50 7.50 7.50 7.50 7.50 10.00 10.00 11.50 11.50 11.50 11.50 11.50 11.50	6.00 6.00 6.00 8.50 8.50 8.50 9.75 9.75 9.75 9.75 9.75 9.75 12.25 12.25 12.25 14.00 14.00 14.00 14.00	8 x 16 9 x 16 6 x 19 7 x 10 8 x 10 9 x 19 10 x 19 8 x 21 9 x 21 10 x 23 12 x 23 14 x 23 14 x 23 16 x 27 16 x 27 18 x 27 18 x 27 18 x 27 18 x 32 18 x 32 20 x 32	11.50 11.50 15.75 15.75 15:75 15:75 20.00 20.00 20.00 20.00 34.00 34.00 34.00 41.00 45.00 45.00 61.00 61.00 61.00	14.00 14.00 18.75 18.75 18.75 18.75 24.00 24.00 24.00 39.00 39.00 39.00 46.00 46.00 51.00 51.00 51.00 70.00 70.00 70.00

We also make upon specification and at special prices cast steel and rolled steel flanges of the highest grade.

# STANDARD TEMPLETS FOR DRILLING.

#### WORKING PRESSURES UP TO 125 POUNDS.

Adopted by Master Steam Fitters' Association and American Society Mechanical Engineers.

Size Flange	Number of Bolts	Size of Bolts	Length of Bolts	Diameter of Bolt Circle	
2 x 6	4	5/8	2	43/4	
2½ x 7	4	5/8	21/4	51/2	
3 x 7½	4	5/8	21/2	6	
3½ x 8½	4	5/8	21/2	7	
4 x 9	4	3/4	23/4	71/2	
4½ x 9¼	8	3/4	3	73/4	
5 x 10	8	3/4	'3	81/2	
6 x 11	8	3/4	3	91/2	
7 x 12½	8.	34	3	103/4	
8° x:13!4	8	.3/4	314	113/4	
9 x 15	12	3/4	3 1/4	131/4	
10 x 16	12	7/8	31/2	141/4	
12 x 19	12	3/8	31/4	17	
14 x 21	12	1	4 1/4	18¾	
15 x 22 ¼	16	1	414	20	
16 x 23 ½	16	1	41/4	21 1/4	
18 x 25	16	11/8	434	223/4	
20 x 27 1/2	20	11/8	5	25	
24 x 32	20	1 14	51/2	29 1/2	

All drills are in multiples of fours, so they may be used at any quarter. All holes straddle centre lines. We also drill to any desired templet.



# EXTRA HEAVY CAST IRON FLANGED FITTINGS.

WORKING PRESSURES UP TO 250 POUNDS



PLATE A ELBOW.



PLATE B

Size 2 2 1/2 3	Faced Only 7.00 7.75	Faced and Drilled	Centre to Face	Diameter of Flanges	Faced Only	Faced and Drilled	Centre to   Face.
21/2			5	1			
	7.75	- 1	0	61/2	7.75	9.00	3
2		9.25	51/2	71/2	8.50	10.00	312
3	8.75	10.50	6	814	9.50	11.00	31/2
31/2	9.75	11.50	61/2	9	10.75	12.50	4
4	10.75	13.50	.4	10	12.00	15.00	41/2
41/2	13.50	16.50	71/2	101/2	15.00	18.00	41/2
5	15.00	17.75	8	11	16.50	19.50	5
6	18.00	21.00	81/2	121/2	19.50	22.50	51/2
7	24.00	28.00	9	14	24.00	28.00	6
8	30.00	35.90	10	15	30.00	35.00	6
0	39.00	45.00	101/2	16	39.00	45.00	61/2
10	48.00	54.00	111/2	171/2	48.00	54.00	7
12	66.00	75.00	13	20	66.00	75.00	8
14	100.00	110.00	141/2	221/2	100.00	110.00	8
15	108.00	120.00	15	231/2	108.00	120.00	81/2
16	125.00	140.00	16	25	125.00	140.00	9
18	160.00	175.00	17	27	160.00	175.00	91/2
20 2	200.00	220.00	18½	291/2	200.00	220.00	10
24	300.00	330.00	22	34	300.00	330.00	111/2

All fittings furnished FACED ONLY unless otherwise specified. We can furnish the above fittings in semi-steel or cast steel. Prices on application.



# EXTRA HEAVY CAST IRON FLANGED FITTINGS.

WORKING PRESSURES UP TO 250 POUNDS



PLATE A



PLATE B REDUCING TEE.

_			LE.			NEDODING.								
Size	Faced Only	Faced and Drilled	Centre to Face of Run	Face of	Dia of Flgs.	Faced Only	Faced and Drilled	Centre to Face of Run	Centre to Face of Outlet	Size of Outlet				
2	10.50	12.50	5	5	61/2	12.00	14.00	80 H L 5	of of					
21/2	11 50	13 50	51/2	51/2	71/2	13 - 25	14.00 15.25	govern govern 2,7,2	th suois					
3	12.50	15.00	6	6	81/4	14.50	17.00	JI suc 6	aller nens					
31/2	14.50	17 00	61/2	61/2	9	16.50	19.00	un. 61/2	ms 61/2					
4,	16.00	20.00	7	7	10	18.50	22.00	is are not changed by reduction in run. If last column or smaller, these dimensions other cases dimensions of straight fittings 6 10 6 8 8 8 % 2 2 9 9 9 9 9	in last column or smaller, these In all other eases dimensions of utlet.					
41/2	19.50	24 00	71/2	71/2	101/2	22.50	27.00	strai	m 10 71/2					
5	21 00	26 00	8	8	11	24.50	29.50	s of	st collocal					
6	28 50	33 50	81/2	81/2	121/2	32.75	37.75	by raller sions	In all outlet.					
7	37-50	45 50	9	9	14	43 25	51.25	r sm men	f size given i of outlet. I of outlet. I	4.				
. 8	43.00	51 00	10	10	15	50.00	58.00	chan o di di o di	or of of					
9	57.00	66.00	101/2	10 ½	16	65.00	74.00	roll case	fac fac					
10	70 00	78.00	111/2	111/2	171/2	80.00	88.00	are st co	ts of to to	6				
12	96.00	110 00	13	13	20	110.00	124.00 170.25 195.00	sions are in last of all other 6	outlets centre centre	8				
14	135 00	150 00	1415	141/2	221/2	155.25	170.25	In I	o st e 131/2	9				
15	157 00	172 00	15	15	23 1/2	180 00	195.00	face dimens size given i of run. In	s ha	9				
16	185 00	200.00	16	16	. 25	210.00	225.00	size of ru	ting gs 15	10				
18	230 00	250 00	17	17	27	265.00	285 00	13 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	When fittings have outlets of ansions govern centre to face fittings govern centre to face fittings govern centre to face fittings for	12				
20	290 00	320.00	181/2	181/2	29 1/2	340 00	370.00	to to to	Nheinsion ht 17/7	14				
24	435.00	475 00	22	22	34	500 00	540.00	Centre to face has outlet of size centre to face of recentre to face of recentre to face of 27.	When fittings have our dimensions govern centre to straight fittings govern centre to 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15				



# EXTRA HEAVY CAST IRON FLANGED FITTINGS.

WORKING PRESSURES UP TO 250 POUNDS.



PLATE A CROSS.



PLATE B CROSS, REDUCING.

			01103	٥.		CROSS, REDUCING.								
Size	Faced Only	Faced and Drilled	to	Centre to Face of Outlet	Dia. of Flgs	Faced Onl /	Faced and Drilled	Run	Centre to Face of Outlet	Size of Out- let				
2	14.00	17.00	5	5	6 1 2	16.50	19.50	E & 1 5	- x - 5					
$2\frac{1}{2}$	15.50	18.50	$5.1_2$	$5\frac{1}{2}$	7 1/2	18.00	21.00	The Brief	smaller, ser cases et.					
3	17.50	21.00	6	6	814	20.50	24.00	e die e						
$3J_{2}$	19.50	23.00	6.12	$6\frac{1}{2}$	9	22.50	26.00	and a second	5 6 1/2					
4	21.50	27.00	7	7	10	25.50	31.00	reduction in run. If umn or smaller, these all other cases dimenof run.	size given in last column or to face of outlet. In all oth govern centre to face of out					
$4^{-1}$	27.00	33.00	7 1/2	7 1/2	1012	31.00	37.00	To In 7 1/2	tac 7 ½					
5	30.00	36.00	8	8	11	34.00	40,00	by redumn column n all ot ce of ru 8	last tlet to s					
6	36.00	42.00	8 1/2	8 1/2	$12^{1}_{2}$	41.00	47.00	fac STS	E 5 8 1/2					
7	48.00	59.00	9	9	14	55.00	66.00	hanged in last fum. I e to fa 8 8 18	iver re o					
s	60.00	70.00	10	10	15	70.00 90.00 110.00	80.00	face dimensions are not changed by recourter of the face of the source of the face of the face of the face of the source of the	Ze g S fac Veri					
9	78.00	90.00	10 12	10 12	16	90.00	102.00	01 H ac 2 10 19	of Signature of Si					
10	96.00	108.00	1112	111/2	1712	110.00	122.00	size to f over	lets of si centre to tings go	6				
12	132.00	150.00	13	13	20	150.00	168.00	Sion of the story	outlets fri cent fitting	8				
1.4	174.00	194.00	14 1/2	1412	22 1/2	198.00		s of cen ting	govern aight fit	9				
15	215.00	240.00	15	15	23 1/2	245.00	270.00	11 t E E E E	stra 13 1/2	9				
16	250.00	280.00	16	16	9.5	905 00	215 00	fac gov uigh	Sing Signature S	10				
18	320.00	350.00	17	17	27	372.00	402.00	re to face dim have outlets dons govern f straight fitt 7 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13	When fittings have see dimensions governmensions of straight 12 12 12 13 15 15 15 15 15 15 15 15 15 15 15 15 15	12				
20	400.00	440.00	1814	1812	29 1 2	465.00	505.00	entr ngs ensi s of	E B I I I I I	14				
24	600.00	660.00	22	22	34	690.00	750.00	Centre to J fittings have dimensions p sions of strains 12 12 12 12 12 12 12 12 12 12 12 12 12 1	When fittings hat these dimensions of stra dimensions of stra 612 12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	15				



## EXTRA HEAVY CAST IRON FLANGED FITTINGS.

WORKING PRESSURES UP TO 250 POUNDS.



PLATE A
LONG RADIUS FLANGED ELBOW.

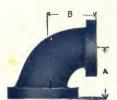


PLATE B REDUCING ELBOW.

Size	Faced Only	Faced and Drilled	Centre to Face	Dia. of Flanges	Faced Only	Faced and Drilled	Centre to Face A	Centre to Face B
2	14.50	17.50	10	61/2	8-50	10.00	51/4	63/4
21/2	15.00	18.75	10	71/2	9.50	11.00	51/2	7
3	17.50	21.00	12	81/4	10.50	12.00	61/4	734
31/2	19.50	23-50	14	9	11.50	13.00	63/4	81/4
4	22.00	26.00	14	10	13.00	15.50	7	81/2
41/2	27.00	32.00	14	101/2	16.00	19.00	71/2	9
5	30.00	35.00	15	11	18.00	21.00	8	91/2
6	36.00	42.00	16	121/2	21.00	24.00	81/2	10
7	48.00	57.50	171/2	14	28.00	32.00	91/2	11
8	60.00	70.00	18	15	37.50	42.50	10	13
9	78.00	88.00	18	16	47.00	53.00	1034	13 3/4
10	96.00	106.00	18	171/2	57.00	63.00	111/2	141/2
12	165.00	175.00	281/2	20	75.00	84.00	1234	1534
14	240.00	255.00	33	221/2	100.00	110.00	141/2	181/2
:15	270.00	285.00	33	231/2	125.00	137.00	15	19
16	300.00	315.00	33	25	150.00	165.00	15	19
18			36	27	190.00	205.00	161/2	221/2
20			42	291/2	235.00	255.00	18	24
24	<b></b>		48	34	400.00	430.00	201/2	261/2



#### EXTRA HEAVY CAST IRON FLANGED FITTINGS

WORKING PRESSURES UP TO 250 POUNDS.

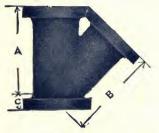


PLATE A STRAIGHT Y'S.

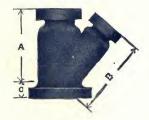


PLATE B REDUCING Y'S

		MAIGHT				1		IL DOON			
Size	Size Faced Only Faced and		Run		Centre to Face of	Dia.	Faced Only	Faced and	Centr Face Ru	of	Centre to Face of
		Drilled	A	C	Outlet B	Flgs.		Drilled	A	c	Outlet B
2	14.00	17.00	10	21/2	10	61/2	16.50	19.50	10 .5	21/2	10
21/2	15.50	18.50	11	3	11	71/2	18.00	20.50	11 de 12 %	3	11
3	17.50	21.00	121/2	3	121/2	81/4	20.50	23.50		3	121/2
31/2	19.50	23.00	131/2	31/2	131/2	9	22.50	26.00	13 1/2 13	31/2	131/2
4	21.50	27.00	141/2	31/2	141/2	10	25.50	31.00	141/2 10	31/2	141/2
41/2	27.00	33.00	151/2	4	151/2	101/2	31.00	37.00	151/2 0	4	151/2
5	30.00	36.00	161/2	4	161/2	11	34.00	40.00	duction in 7.91 application.	4 Volumn	161/2 5
6	36.00	42.00	181/2	41/2	181/2	121/2	41.00	47 00	181/2 8 18		181/2 5
7	48.00	59.00	201/2	5	201/2	14	55.00	66.00	20 1/2 nd	5 uipa	20 ½ ig
8 .	60.00	70.00	211/2	5,	211/2	15	70.00	80.00	21 1/2 2 5	2 2 preceding	20 1/2 building 21 1/2 21
9	78.00	90.00	23	51/2	23	16	90.00	102.00	23 Ag no six	51/2 8	23 8
10	96.00	108.00	241/2	51/2	241/2	171/2	110.00	122.00	changed changed	51/2 E	24 ½ gares
12	132.00	150.00	28	61/2	28	20	150.00	168.00	cha ensi	61/4	28
14	174.00	194.00	32	7	32	221/2	198.00	218.00	32 to min	Nore.	Norte
15	215.00	240.00	331/2	71/2	331/2	231/2	245.00	270.00	33 1/2 e 8/2	71/2	33 1/2
16	250.00	280.00	331/2	71/2	331/2	25	285.00	315.00		71/2	331/2
18	320.00	350.00	361/2	8	361/2	27	372.00	402.00	Dimensions 7, 98	8	36 1/2
20	400.00	440.00	40	91/2	40	291/2	465.00	505.00	40 H e	91/2	40
24	600.00	660.00	46	10	46	34	690.00	750.00	46 High	10	46
		1			1	1	11	1	. 6	1	1



# EXTRA HEAVY CAST IRON FLANGED FITTINGS.

WORKING PRESSURES UP TO 250 POUNDS.



PLATE A



PLATE B

Size.	Faced Only	Faced and Drilled	Centre to Face	Centre to Base	Faced Only	Faced and Drilled	Face to Face	Size
4	17.50	20.50	7	6	11.50 12.50	13.50 15.00	5½ 6¼	2½x 2 and under
41/2	22.00	25.00	71/2	61/4	14.50	17.00	63/4	3½x 3 and under
5	25,00	28.00	8	61/2	16.00 19.50 21.00	20.00 24.00 26.00	7 7½ 8	4 x 3½ and under 4½x 4 and under 5 x 4½ and under
6	30.00	32.00	81/2	71/4	28.50	33.50	81/2	6 x 5 and under
7	40.00	45,50	91/2	8	37.50 43.00 60.00	45.50 - 51.00 70.00	9½ 10 15	7 x 6 and under 8 x 4 and over 8 x 3½ and under
8	50.00	55.50	10	81/2	57.00	66.00	103/4	9 x 4 and over
9	65,00	71.50	103/4	9	78.00 70.00	90.00 78.00	16 11½	9 x 3½ and under 10 x 5 and over
10	80,00	86,50	111/2	93/4	96.00 96.00	108.00 110.00	$\frac{17}{1234}$	10 x 4½ and under 12 x 6 and over
12	110.00	119.00	123/4	11	132.00 135.00	150.00 150.00	18	12 x 5 and under and over
14	145.00	156.00	141/2	121/4	174.00 157.00	194.00 172.00	18 15	14 x 7 and under 15 x10 and over
15	180.00	192.00	15	1234	215.00 185.00	240.00 200.00	22 15	15 x 9 and under 16 x10 and over
16	<b>2</b> 10.00	225.00	15	131/2	250.00 230.00	280.00 250.00 350.00	24 16½	16 x 9 and under 18 x10 and over 18 x 9 and under
18	250.00	270.00	161/2	141/2	320.00 290.00 400.00	350.00 320.00 440.00	24 18 30	18 x 9 and under 20 x12 and over 20 x10 and under
20	320.00	350.00	18	16	435.00	475.00	20 ½ 36	24 x12 and over 24 x10 and under
24	475.00	520.00	201/2	18		300.00		and under



#### EXTRA HEAVY CAST IRON FITTINGS.

WORKING PRESSURES UP TO 250 POUNDS.



PLATE A THREADED.



PLATE B

2-					
Size	Faced Only	Faced and Drilled	O. D. of Flanges	Faced Only	Faced and Drilled
2	1.50	2.00	6 ½	1.90	2.40
2 ! 1	2.00	2.50	7 ½	2.50	3.00
3	2.25	3.00	834	2.80	3.60
3.14	2.50	3.50	9	3.15	4.15
4	3.00	4.00	10	3.75	4.75
4,11	3.50	4.50	10 ½	4.40	5.40
5	3.75	5.00	11	4.70	6.00
6	4.25	5.75	121/2	5.30	6.80
7	5.75	7.25	14	7.20	8.70
8	6.50	8.25	15	8.15	9.90
9	8.25	10.00	16 .	10.30	12.10
10	9.25	11.50	17 ½	11.55	13.80
12	12.50	15.00	20	15.65	18.15
14	16.00	18.50	22 ½	20.00	22.50
15	20.00	23.00	23 ½	25.00	28.00
16	25.00	28.50	25	31.25	34.75
18	32.00	36.00	27	40.00	44.00
20	36.00	40.00	29 ½	45.00	49.00
24	50.00	56.00	34	62.50	68.50

We also make upon specification and at special prices cast steel and rolled steel flanges of the highest grade.



#### EXTRA HEAVY CAST IRON REDUCING FLANGES.

WORKING PRESSURES UP TO 250 POUNDS.



PLATE A REDUCING FLANGE.

Size, Inches	Price, Faced, Each	Price, Faced and Drilled, Each	Price, Faced, Drilled and Bolted On, Each	Size, Inches	Price, Faced, Each	Price, Faced and Drilled, Each	Price, Faced, Drilled and Bolted On, Each
1 1/2x 7 1/2 2 x 7 7/2 1 1/2x 8 8/4 2 2 x 8 8/4 2 1/2x 8 1/4 2 1/2x 9 3 x 9 2 x10 2 1/2x10 3 1/2x10 3 1/2x10 4 x10 1/2 2 1/2x11 3 1/2x11 4 x10 1/2 2 1/2x12 4 1/2x12 4 1/2x12 4 1/2x12 4 1/2x12 5 x12 4 1/2x12 5 x12 6 x15 5 x15 6 x15 7 x15	3.00 3.40 3.40 3.40 3.75 3.75 4.50 4.50 4.50 5.25 5.25 5.25 5.60 6.40 6.40 6.40 6.40 6.40 6.40 6.40 6	3.50 3.50 4.15 4.15 4.15 4.75 5.50 5.50 6.25 6.25 6.25 6.90 6.90 6.90 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00	4.00 4.00 4.65 4.65 4.65 5.50 5.50 6.50 6.50 6.50 6.50 6.775 7.75 7.75 7.75 7.75 8.60 8.60 8.60 8.60 8.60 8.60 8.60 9.90 9.12 140 12.40 14.00 14.00 14.00 14.00 14.00 14.00 14.00	5x16 6x16 6x16 8x16 5x17 1/2 6x17 1/2 9x17 1/2 9x17 1/2 9x17 1/2 9x20 10x20 8x20 9x20 10x20 10x20 10x22 1/2 12x22 1/2 12x22 1/2 12x22 1/2 12x23 1/2 12x23 1/2 12x25 1/2 12x25 1/2 12x25 1/2 12x25 1/2 12x27 1/2 16x27 1/	12.40 12.40 12.40 13.90 13.90 13.90 13.90 13.90 13.90 18.75 18.75 18.75 18.75 24.00 24.00 24.00 30.00 30.00 37.50 37.50 37.50 48.00 48.00 48.00 54.00 54.00 54.00 54.00 60.00 60.00	14.10 14.10 14.10 16.10 16.10 16.10 16.10 16.10 16.10 16.10 21.25 21.25 21.25 21.25 26.50 26.50 26.50 33.00 33.00 33.00 40.50 40.50 40.50 52.00 58.00 58.00 58.00 65.00 65.00	18.10 18.10 18.10 18.10 18.10 21.60 21.60 21.60 21.60 21.60 21.60 27.25 27.25 27.25 27.25 27.25 27.25 27.25 36.00 36.00 43.00 43.00 43.00 43.00 64.00 64.00 64.00 64.00 64.00 64.00 64.00 64.00 64.00 64.00 64.00 64.00 682.00 82.00
7 x15 4 x16	$9.75 \\ 12.40$	14.10	14.00 18.10	18x34 20x34	75.00 75.00	81.00 81.00	100.00

Extra Heavy Reducing Companion Flanges are the same thickness and are drilled to same template as our regular Extra Heavy Companion Flanges of corresponding outside diameter. When ordering Reducing Companion Flanges be particular to give both the

pipe size and outside diameter.
Note.—Flanges will always be furnished faced only, unless otherwise ordered.

# EXTRA HEAVY AND MEDIUM TEMPLETS FOR DRILLING.

#### WORKING PRESSURES UP TO 250 POUNDS.

Adopted by Manufacturers', Steam Fitters' Association and American Society Engineers.

Size	Outside Diameter	Bolt Circle	Number of Bolts	Size of Bolts	Length of Bolts
2	61/2	5	4-	5 8	21/2
21/2	71/2	5 3/8	4	34	3
3	81/4	65/8	8	5/8	3
31/2.	9	71/4	8	5 %	3 1/4
4	10	738	8	34	31/2
41/2	101/4	81/2	3	3/4	31/2
5	11	91/4	8	34	334
6	121/2	1058	12	34	31/4
7	14	1178	12	3/8	4
8	15	13	12	7.8	4 1/4
9	16	14	12	3.8	41/2
10	171/2	151/4	16	38	434
12	20	173/4	16	38	5
14	221/2	20	20	3.6	51/4
15	231/2	21	20	ı	51/2
16	25	221/2	20	1	53/4
18	27	241/2	24	1	6
20	291/2	2634	24	11/8	61/2
24	34	31 1/4	28	118	7

#### CORRUGATED COPPER GASKETS.

For Circular, Eliptical and Rectangular Shapes, see below.



PLATE A

	PLATE	A	
000   000	14½ in. 3.30 26½ 14¾ in. 3.42 26¾ 15 in. 3.53 27 15¼ in. 3.65 27⅓ 15⅓ in. 3.77 27⅓ 15⅓ in. 3.90 27⅓	4 in. 5.52 334 in in. 5.82 314 in in. 5.82 314 in in. 5.82 314 in in. 5.82 314 in in. 6.28 32 in in. 6.28 32 in in. 6.28 324 in in. 6.28 324 in in. 6.60 334 in in. 6.76 324 in in. 6.70 334 in in. 7.26 334 in in. 8.31 35 in in. 9.24 36 in in. 9.24 36 in in. 9.24 36 in in. 9.24 36 in in. 9.32 37 in in. 10.31 37 in in. 10.31 37 in in. 10.31 37 in in. 10.31 37 in in. 10.32 38 in in. 10.82 38 in. 10.82 38 in. 11.32 38 i	This Metallic Gasket may be used in place of rubber or other destructible may be reading. It consists of this sheet copper, stamped with concentric cornins to corrugations are all that are necessary, so that the space within the bolt as the width of the Gasket. In cases where the flanges are 'thin, and for this nad when the bolts are tightened, it is advisable to extend the copper Gasket to not form the country of the country of the cutting of both holes in the Gasket to 11.15.5.5.80.83.49.50.11.17.76.89.69.89.89.89.89.89.89.89.89.89.89.89.89.89
144 in28 434 in30 434 in30 434 in34 434 in34 434 in35 434 in35 15 in35 16 in35 17 in35 18 in35 19 in35 10 in35 11 in35 11 in35 12 in35 13 in35 14 in35 15 in35 16 in35 17 in35 18 in35 19 in35 10 in35 10 in39	14½ in. 3.30 269 14¼ in. 3.42 269 15 in. 3.53 27 15¼ in. 3.65 27, 15¼ in. 3.77 27, 15¼ in. 3.90 27, 16 in. 4.02 28	in. 11.45   39 i 4 in. 11.66   39¼ i 4 in. 12.10   39¾ i in. 12.32   40 i	asket to the 24.51 a. 24.51 a. 24.51 a. 25.13
1/2 in 32/2 in 34/2 in 34/2 in 35/2 in 35/2 in 35/2 in 35/2 in 43/2 in 48/2 in 48/2 in 55/2 in 48/2 in 55/2 in	16¼ in. 4.15 28 16¾ in. 4.28 28 16¾ in. 4.41 28 17 in. 4.54 29 17¼ in. 4.67 29 17¼ in. 4.81 29 17¾ in. 4.95 29	4 in. 12.76   40½ i 4 in. 12.98   40¾ i in. 13.21   41 i 4 in. 13.44   41½ i 4 in. 13.67   41½ i	n. 25.45 n. 25.47 n. 26.08 n. 26.73 n. 26.73 n. 27.05

The prices given above are for Solid Gaskets on basis two cents per square inch surface

The difference between price of outside and inside diameters will be the price of required Gasket.

Example for Gasket 10 x 5 inch, i.e.: 10 inch solid Gasket cost 1.57; inch solid Gasket cost 39 cents—difference 1.18 for one 10 x 5 inch Gasket.



#### MACHINE BOLTS.

#### MANUFACTURERS' STANDARD.



PLATE A

		DIAMETER OF BOLTS													
Leng'h	38	1,2	1/2	5 %	34	7.8	1	11/8	11/4						
2	2.56	3.00	3.86	5 58	7 70	11 20	16 00	23 70	31 50						
21/2	2.72	3.20	4.12	5.96	8 20	11 90	16 90	24.90	33 00						
3	2.88	3.40	4.38	6.34	8 70	12 60	17 80	26 10	34 50						
31/4	3.04	3.60	4.64	6.72	9 20	13.30	18 70	27 30	36 00						
4 .	3.20	3 80	4.90	7 10	9.70	14 00	19.60	28 50	37 50						
41/2	3.36	4.00	5.16	7 48	10 20	14 70	20.50	29 70	39 00						
5	3.52	4.20	5 42	7 86	10 70	15 40	21 40	30 90	40.50						
51/2	3.68	4.40	-5 68	8 24	11.20	16 10	22 30	32.10	42.00						
6	3.84	4.60	5.94	8 62	11 70	16.80	23 20	33.30	43.50						
61/2	4.00	4.80	6.20	9 00	12 20	17 50	24 10	34_50	45.00						
7	4.16	5 00	6 46	9 38	12 70	18 20	25 00	35 70	46 50						
71/2	4.32	5.20	6.72	9 76	13 20	18 90	25 90	36 90	48 00						
8	4.48	5.40	6.98	10 14	13 70	19 60	26 80	38 10	49 50						
9	4.80	5.80	7 50	10 90	14 70	21 00	28 60	40.50	52.50						
10	5.12	6.20	8 02	11 66	15 70	22 40	30 40	42.90	55.50						
11	5.44	6.60	8 54	12 42	16 70	23 80	32.20	45 30	58.50						
12	5.76	7.00	9.06	13 18	17 70	25 20	34.00	47 70	61.5						
13	6.08	7.40	9 58	13 94	18.70	26.60	35 80	50 10	64 5						
14	6.40	7.80	10 10	14 70	19.70	28 00	37 60	52 50	67 5						
15	6.72	8.20	10.62	15 46	20 70	29 40	39 40	54.90	70.5						

We always furnish bolts with square heads and hexagon nuts unless otherwise specified. Bolts with either hexagon heads or nuts add 10% to net.

Bolts with both hexagon heads and nuts add 20% to net.



PLATE A



PLATE B



PLATE C



PLATE D
22 1-20 ELBOW



PLATE E



PLATE F 5 5-8 ELBOW



PLATE G 90<sup>0</sup> LONG TURN ELBOW



PLATE H 45<sup>0</sup> LONG TURN ELBOW

#### BLACK

SizeInches	1,1/4	112	2	$\frac{2}{2} \frac{1}{2}$	3	4	5	6	7	8	10	12
90° Elbow Ea.	.30	.38	. 57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00	47.50
60° Elbow Ea.		.38	. 57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00	
45° Elbow Ea.												
22 1/9° Elbow Ea.		.38	.57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00	
11 14° Elbow Ea.		.38	57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00	
558° Elbow Ea.		.38	.57		1.45	2.30	4.25	6.25	11.50	15.00	31.00	
90° L'g T'n Elb Ea.	.35	.42	.65	1.40	1.75	2.75	5.25	7.50	13.50	19.00	38.00	57.50
45° L'g T'n Elb. Ea.		.42	.65	1.40	1.75	2.75	5.25	7.50	13.50	19.00	38.00	

SizeInches	1.34	$1\frac{1}{2}$	2	2	$\mathfrak{l}_{2}$	3	4	5	6	7	8	10	12
90° Elbow Ea.	.52	.67	1.00	2.	10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	83.00
60° Elbow Ea.		.67	1.00	2.	10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	
45° Elbow Ea.	.52	.67	1.00	2.	10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	
22 1/6° Elbow . Ea.		. 67	1.00	2.	10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	
11 14° Elbow Ea.		.67	1.00	2.	10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	
5 5% Elbow . Ea.		.67	1.00			2.55	4.00	7.40	11.00	20.00	26.25	54.00	
90° L. T. Elb. Ea.	.60	.72	1.15	2.	45	3.10	4.80	9.20	13.15	23.50	33.25	66.50	100.00
45° L. T. Elb . Ea.		.72	1.15	2.	45	3.10	4.80	9.20	13.15	23.50	33.25	66.50	





PLATE A 90<sup>0</sup> ELBOW, WITH SIDE OUTLET



PLATE B 90<sup>0</sup> ELBOW, WITH HEEL OUTLET



PLATE C 3-WAY ELBOW



PLATE D
REDUCING CLOSET ELBOW



PLATE E CLOSET FLANGE, IRON



PLATE F CLOSET FLANGE, BRASS

#### BLACK

SizeInches	1 1/2	2	3	4	5	6
90° Elbow with Side Outlet Each				9 95		
Linee-way Eddow	83	1 10	3 (3()	5 (10)	7 50	10 *
reducing Inree-way Elbow Each				5 50	0 17 "	1 - (
loset Elbows Each				1 0 =		
reducing Closet Elbows Each					4 9 =	
artifion Crosses, Reducing Each	1 75					
loset Flanges				1 25		
rass closet Flanges Each				7.00		
for Asbestos Ring PackingEach				1.35		

SizeInches	$1^{-1}\frac{1}{2}$	2	3	4	5	6
90° Elbow with Side OutletEach				6 75		
90° EIDOW WITH Freel OHITEL Fach				6 75		
Reducing Tiffee-way Elbow Each				0 65	11 50	00 0
Closet Elbow. Each				7.40		
Reducing Closet Elbows Each Partition Crosses, Reducing. Each	9 90				7.40	
Closet Flanges Each	2.20					
for Asbestos Ring Packing Each				9 35	-	



PLATE A 90<sup>0</sup> Y BRANCH TEE PATTERN



PLATE B

DOUBLE 90 Y BRANCH

TEE PATTERN

(CROSS)

SizeInches	1 1/4	1 1/2	2 2 2 2	2 3	4
90° Y Branches, Tee PatternEach	.45	. 57	.85 1.8	80 2.20	3.50
Reducing 90° Y Branches, Tee Pattern Each			.952.0		
90° Long Turn Y Branches, Tee Pattern Each			.10 2.4		
Reducing 90° Long Turn Y Branches, Tee Pat. Each			.20 2.6		
Double 90° Y Branches, Tee Pattern Each			.30 2.8		
Double Reducing 90° Y Branches, Tee Pat Each			.503.1		
Double 90° Long Turn Y Branches, Tee Pat Each			.753.6		
Doub. Red'g 90° Long Turn Y Br., Tee Pat. Each					1-0.00
SizeInches	5	6	7	8	10
90° Y Branches, Tee PatternEach	6.50	9.50	17.50	23.00	47.00
Reducing 90° Y Branches, Tee PatternEach	7.15	10.50	19.00	25.50	
90° Long Turn Y Branches, Tee Pattern Each	9.50	20.00	30.00	40.00	
Reducing 90° Long Turn Y Branches, Tee Pat. Each	10.50	22.00	33.00	44.00	
Double 90° Y Branches, Tee Pattern Each					
Double Reducing 90° Y Branches, Tee Pattern. Each					
Double 90° Long Turn Y Branches, Tee Pat Each					
Doub. Red'g 90° Long Turn Y Br., Tee Pat. Each	15.50	33.00			

BLACK

SizeInches					
90° Y Branches, Tee PatternEach	.80	1.00	1.50 3.	$15 \ 3.85$	6.15
Reducing 90° Y Branches, Tee PatternEach					6.75
90° Long Turn Y Branches, Tee Pattern Each					10.50
Reducing 90° Long Turn Y Branches, Tee Pat. Each					
Double 90° Y Branches, Tee PatternEacl	11.22	1.50	2.30  5.0	00 5.95	9.20
Double Reducing 90° Y Branches, Tee Pattern, Each					
Double 90° Long Turn Y Branches, Tee Pat Each					
Doub. Red'g 90° Long Turn Y Br., Tee Pat. Eac	1		3.35	9.65	17.50
SizeInche	5	6	7	8	10
90° Y Branches, Tee Pattern	111.3	5 16.5	0 30.50	40.00	
Reducing 90° Y Branches, Tee Pattern Eac	1 12.5	0 18.5	0 33.25	44.50	
90° Long Turn Y Branches, Tee Pattern Eac	1 16.5	0 35.0	0 52.50	70.00	
Reducing 90° Long Turn Y Branches, Tee Pat. Each	1 18.5	0 38.5	0 58.00	77.00	
Double 90° Y Branches, Tee Pattern Eac	16.5	0 24.5	0		
Double Reducing 90° Y Branches, Tee Pattern. Eac	1 18.5	0 27.0	0		
Double 90° Long Turn Y Branches, Tee Pat Each	1 24.5	0 52.5	0 79.00	105.00	
Doub. Red'g 90° Long Turn Y Br., Tee Pat. Eac	1 27.0	0 58.0	0	1	





PLATE A



PLATE B BASIN TEE



PLATE C BASIN CROSS

#### BLACK

SizeInches	112	2	3	4	5	6	7	8	10
TeesEach									
Reducing Tees Each									
Basin Tees Each									
Reducing Basin Tees Each		1.20							
Basin Crosses Each		1.75							
Reducing Basin Crosses Each		1.95							

#### GALVANIZED

SizeInche	18	1 1/2	2	2		3	1		4	1		5			6	5			7			8			1	()
TeesEac	h	1.0	0	1.40	3	. 50	) ,	5.	70	)	10		50	1.	5.	25	2	8	. (	)()	37		0(	7	5.	. ()(
Reducing TeesEac	h			1.60	3	. 8.	5 (	6.	30	)	11		5.5							٠.,						
Basin Tees Eac	h	1.2	2	1.95																						
Reducing Basin Tees Eac	h			2.10													١.							١,		
Basin Crosses Eac	·h			3.10			.							١.			١.			!						
Reducing Basin Crosses Eac	h			3.40			. 1										١.					Ĺ		1		

#### TUCKER CONNECTIONS

SizeInches	2	212	3	4	6	8	10
BlackGalvanized	.80 1.40	$\frac{1.50}{2.45}$	$\frac{2.00}{3.50}$	$\frac{3.25}{5.70}$	$8.75 \\ 15.25$	$\frac{21.00}{37.00}$	$\frac{43.00}{75.00}$

PLATE D



PLATE A



PLATE B



PLATE C INCREASER



PLATE D ROOF CONNECTION



PLATE E
BRASS SOLDERING
NIPPLE

#### BLACK

SizeInches	114	$1^{-1}_{-2}$	2	$\frac{2}{2}$	3	4	5	6	7	8	10
45° Y Branches Ea	. 52	.65	.95	2.10	2.65	3.85	7.10	10.50	19.00	25.00	52.00
Reducing 45° Y Branches Each 45° Double Y		.72	1.05	2.30	2.90	4.25	7.80	11.50	21.00	27.50	
Branches, Each Reduc'g 45° Double	.90	1.00	1.45	3.25	4.00	5.75	10.75	16.00	28.50	38.00	78.00
Y Branches. Each			1.60	3.60	4.40	6.35	11.75	17.50			
Reducing 60° Y BranchesEach											
Increasers Each Roof Connect'ns Ea			i.i5		$\frac{2.50}{1.20}$	$\frac{3.75}{1.50}$	$\frac{5.50}{2.00}$	$\frac{6.50}{4.25}$		15.00	
Brass Soldering NipplesEach											

SizeInches	11/4	$1\frac{1}{2}$	2	$24_2$	3	4	5	6	7	8	10
45° Y Branches, Ea.	.90	1.15	1.65	3.70	4.65	6.75	12.50	18.50	33.25	44.00	91.00
Reducing 45° Y BranchesEach		1 95	1 95	1 00	5 10	7.40	12 65	20.00	27 00	18 00	
45° Double Y											
Branches Each Reduc'g 45° Double	1.60	1.75	2.55	5.70	7.00	10.00	18.80	28.00	50.00	66.50	137.00
Y Branches, Each			2.80	6.30	7.70	11.00	20.50	30.50			
Reducing 60° Y Branches, Each		1 05	1 05	1 00	= 10	7 40	19 65	20.00	27 00	18 00	
Increasers Each					4.40	6.55	9.65	11.35		26.25	
Roof Connect'ns Ea			2.00		2.10	2.60	3.50	7.40			

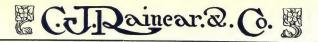




PLATE A



PLATE B HALF S TRAP



PLATE RUNNING TRAP



PLATE D

#### BLACK

SizeInches	$1\frac{1}{2}$	2	3	4	5	6	7	8	10
S TrapsEach		4.00	9.25	14.00	21.00	36.00	45.00	60.00	
Half S Traps Each	1.70	2.20	5.00	10.00	21.50	32.50	40.00	55 00	
Running Traps Each	2.70	3.30	5.50	9.75	24.50	33.50	50.00	65.00	115.00
Offsets:									
To Offset 4 inches . Each		2.15	3.35	5.00					
To Offset 6 inches . Each		2.40	4.00	5.75	9.00	12.50			
To Offset 8 inches . Each		2.60	4.75	6.50	10.00	13.50			
To Offset 10 inches. Each		2.85	5.50	7.50	11.00	14.50			
To Offset 12 inches. Each				8.50	12.00	15.50			

SizeInches	1 1/2	2	3	4	5	6	7	8	10
S Traps Each		7.00	16.00	24.00	37.00	63.00	78.00	105.00	
Half S Traps Each	$\frac{3.00}{100}$	3.85	8.75	17.50	37.50	57.00	70.00	95.00	
Running Traps Each Offsets:			ļ						
To Offset 4 inches. Each		3.75	5.85	8.75					
To Offset 6 inches. Each		4.20	7.00	10.00	15.75	22.00			
To Offset 8 inches. Each		4.55	8.30	11.35	17.50	23.50			
To Offset 10 inches Each		5.00	9.65	13.15	19.25	25.50			
To Offset 12 inches Each				15.00	21.00	27.00			

#### CAST IRON DRAINAGE FITTINGS

#### SCREWED FOR IRON PIPE

#### LONG TURN 90° Y BRANCHES, WITH AUXILIARY INLETS



PLATE A
CLOSET TEE, WITH INLETS ON
BOTH SIDES



PLATE B

CLOSET TEE, WITH INLETS ON
BOTH SIDES AND TOP

#### BLACK

SizeInches	3	4	5 x 4	6 x 4
With One Inlet on Side Each	5.25	9.00	12.00	23.00
With Two Inlets on Side	5.75	10.00	13.00	25.00
With One Inlet on Side and One on TopEach	5.75	10.00	13.00	25.00
With Two Inlets on Side and One on $\operatorname{Top}\nolimits \ldots \operatorname{Each}\nolimits$	6.50	11.00	14.50	28.00

SizeInches	3	4	5 x 4	6 x,4
With One Inlet on Side	9.20	15.75	21.00	40.00
With Two Inlets on Side	10.00	17.50	22.75	44.00
With One Inlet on Side and One on TopEach	10.00	17.50	22.75	44.00
With Two Inlets on Side and One on TopEach	11.35	19.25	25.50	49.00



#### MALLEABLE IRON FITTINGS.



PLATE A ELBOW.



PLATE B ELBOW, BEAD.



PLATE C



PLATE D TEE, BEAD.



PLATE E CROSS.



PLATE F CROSS, BEAD.



PLATE G RETURN BEND.



PLATE H
DROP ELBOW, FEMALS.



PLATE I DROPTEE, FEMALE.



PLATE J STREET ELBOW.



PLATE K
RIGHT HAND COUPLING.



PLATE L
RIGHT AND LEFT HAND COUPLING.



PLATE M



PLUG.



PLATE O LOCK NUT.



PLATE P BUSHING.



### REVISED CLASSIFICATION AND PRICE LIST JUNE 5, 1907

#### MALLEABLE IRON FITTINGS FOR STEAM, GAS AND WATER

CLASS	A	В	. C
Price, per Pound, Black	.40	. 20	.12
Price, per Pound, Galvanized.	. 50	. 28	. 19
Elbows		14 X 14 3/8 X 14 1/2 X 1/2 3/8 X 3/8 1/2 X 1/4 & 1/2 X 3/8	*34 and larger
Elbows, Right and Lett	1/4 and 3/8	1/2, 3/4 and 1	*1 1/4 and larger
Elbows, 45°		14 to 2 inclusive	2 1/2 and larger
Elbows, Street		14 and 38 1/2 and 34 34 x 1/2 and 1 x 3/4	1 and larger
Elbows, Side Outlet		All Sizes	
Elbows, Drop		All Sizes Reducing and Straight	
Tees	1 8X 1 8 1 8X 14 14 X 18 3 8X 18	14x 14 38x 38 14x 38 38x 14x 14 12 and 12 38x 14x 38 Reducing	
Tees, Street		34 and 1x 34x1	1 and larger
Tees, Four-Way		All Sizes	
Tees, Drop		All Sizes Straight and Reducing	
Straight Crosses		1/4 to 1 inclusive	1 1/4 and larger
Reducing Crosses		1 and smaller	*1 1/4 and larger
Y Bends		All Sizes	
Return Bends	1/4	3/8 to 1 inclusive	1 1/4 and larger
Return Bends, Right and Lett	3/8 and 1/2	34 and larger	
Couplings, Right Hand	1/8	1/4 to 3/4 inclusive	1 and larger
Couplings, Right and Left	1.8	14 to 34 inclusive	1 and larger
Couplings, Reducing	1/4 X 1/8 3/8 X 1/8 1/2 X 1/8	3/8x 1/4 to 1x 3/4 inclusive	*1 ¼ and larger
Caps	1/8	14 to 1 inclusive	1 1/4 and larger
Locknuts	1,6	14 to 114 inclusive	1 1/2 and larger
Extension Pieces		All Sizes	
Waste Nuts		All Sizes	
Chandelier Hooks		All Sizes	
Wall Plates		All Sizes	
Pump Rod Couplings	3/8, 3/8X 7 7 7	1/2 and 3/4	

<sup>\*</sup> Fittings in Class C having one or more outlets smaller than 34 will be charged in Class B.

Orders for less than 25 pounds of Black Fittings in Classes B and C will be charged at a uniform price of 20 cents net per pound, and in Class A at 40 cents net per pound.

net per pound.

Above prices on Galvanized Fittings are for Standard Sizes.
Other sizes will be made to order at a special price, according to quantity ordered.
The run of Tees (Bullheads), gives the size for the purpose of classification, and the outlet being large, does not change it.



#### A. B. C. MALLEABLE IRON HANGERS







PLATE E



PLATE !

Size Inches	34	1	1 1/4	1 1/2	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Plate A Plate B Plate C	. 22	. 23	. 24 . 24 . 27	. 26 . 26 . 30	.30 .30 .35	.35 .35 .40	.42	.52 .52 .57	.62 .62 .67

Standard Rods included in above prices.

#### HANGER ROLLS



PLATE I

Size, for Pipe	1	11/4	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	3 1/2	4
Length, End to EndInches	3	3	3	3 1/4	4 34	4 34	$5\frac{1}{2}$	5 1/2
Roll Only Each	.06	.07	.08	.13	.15	.18	.21	. 21
Size, for Pipe						10	12	14
Length, End to EndInches	6	6	7.34	8	9	11 ½	14	$17\frac{1}{2}$
Roll OnlyEach	. 24	. 24	. 27	.36	.44	.72	1.05	1.32

# Col. Dainear. 2. Co. 3



#### PIPE HANGERS



SOLID RING EXTENSION PIPE HANGER

SPLIT RING EXTENSION PIPE HANGER

#### SPLIT RING EXTENSION PIPE HANGERS

SizeInches	3/8	1/2	34	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8
Tapped for	1/4	1/4	1/4	1/4	1/4	1/4	1/4	3/8	1/2	1/2	3/4	3/4	1	1
Plain Iron, complete Galv. Iron, complete	.22	.22	.27	.32	.35	$.40 \\ .50$	.50 .60	.70 .80	1.00	$\frac{1.10}{1.25}$	$\frac{1.40}{1.75}$	$\frac{1.90}{2.25}$	$\frac{2.50}{3.00}$	$\frac{3.00}{3.50}$

#### SOLID RING EXTENSION PIPE HANGERS

				_				-						
SizeInches	31	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	4 1/2	5	6	7	8
Tapped for												1/2	1/2	1/2
Plain, less Nipples Galv., less Nipples	.17	.18	.19	.25	.29 .45	.36	.44	.55 .80	.63 .95	$\frac{.90}{1.35}$	$\frac{1.12}{1.65}$	$\frac{1.35}{2.00}$	$\frac{1.80}{2.75}$	$\substack{2.25\\3.50}$



MALLEABLE IRON PIPE HANGER SOLID RING PIPE HANGER



#### MALLEABLE IRON PIPE HANGERS

SizeInches 38 1/2 34 1 1 1 1/4 1 1/2 2 2 1/2 3 4 5 6	7	8
Tapped for	4 1	11
Plain Iron Each .15 .15 .18 .22 .27 .35 .40 .45 .50 .65 1.00 1. Galy, Iron Each .17 .17 .20 .25 .30 .40 .50 .60 .65 .80 1.50 2.	50 2.00	$\frac{2.50}{3.00}$

#### SOLID RING PIPE HANGERS

SizeInches	3/8	1/2	3/4	1	1 1/4	1 ½ 2
Plain Iron Per 100 Galvanized Iron Per 100	$\frac{5.00}{6.50}$	$\frac{5.00}{6.50}$	$\frac{5.80}{7.00}$	$7.75 \\ 9.00$	$10.00 \\ 12.00$	$\begin{array}{c cccc} 14.00 & 22.00 \\ 16.00 & 25.00 \end{array}$



#### MALLEABLE IRON RAILING FITTINGS,

FOR FENCES, ENCLOSING ENGINES AND MACHINERY EXHIBITION SPACES, ETC.



PLATE A ELBOW



PLATE B ELBOW, SIDE OUTLET



TEE



PLATE D TEE, SIDE OUTLET



PLATE E CROSS



CROSS, SIDE OUTLET FLOOR FLANGE





BUSHING



ORNAMENT

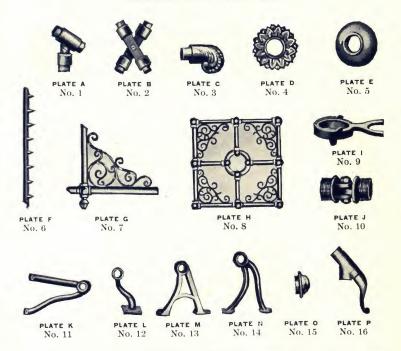
SizeInches	1/2	34	1	114	112	2	2 1/2	3
Elbow	. 15	.18	. 20	.35	.45	.72	1.60	2.25
Elbow, Side Outlet	. 20	. 23	. 25	.40	. 50	.80	1.75	2.50
1ee	. 20	. 23	. 25	.40	. 50	.75	1.75	2.50
Tee, Side Outlet	. 30	. 33	.35	.45	. 55	. 90	1.90	2.60
Cross	. 30	. 33	.35	.45	. 58	1.00	1.80	2.60
Cross, Side Outlet	.35	.38	.40	.50	.65	1.35	2.00	2.75
Floor Flange	.14	. 15	.15	. 20	. 28	.30		
Acorn Ornament	.16	.18	. 20	.25	.35	.90		
Bushings, red'd one and two sizes		.06	.07	.10	.12			

GALVANIZED, DOUBLE LIST

#### LIST OF REDUCING SIZES OF RAILING FITTINGS

Elbows	Elbows, Side Outlet	Tees	Tees, Side Outlet	Crosses
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 x 1/2 x 1/4 1 x 3/4 x 3/4 1 1/4 x 3/4 x 3/4 1 1/4 x 1 x 1 1 1/2 x 1 x 1 1 1/2 x 1 1/4 x 1 1/4 2 x 1 1/4 x 1 1/4 2 1/4	34 x 34 x 14 1 x 1 x 1 x 12 1 x 34 x 34 1 x 34 x 1 1 x 1 x 1 x 14 1 x 1 x 1 x 14 1 4 x 1 4 x 1 1 4 x 1 4 x 1 1 4 x 1 4 x 1 1 4 x 1 4 x 1	1 ½ x 1 ½ x 3 ¾ x 3 ¾ x 1 ½ x 1 ½ x 1 ½ x 1 x 1 x 1 1 ½ x 1 ½ x 1 ½ x 1 x 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
3 x 2	3 x 2	1 ½ X 1 ½ X 1 1 ½ X 1 ½ X 1 ¼ 1 ½ X 1 ½ X 2	3 x 3 x 2 x 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
		2 x 2 x 1 14 2 x 2 x 1 ½ 2 x 2 x 3 2 ½ x 2 ½ x 1 14 2 ½ x 2 ½ x 1 14 2 ½ x 2 ½ x 1 14 2 ½ x 2 ½ x 1 ½ 2 ½ x 2 ½ x 1 ½		1/2X 1/2X 1/2X 1/2X 1

#### RAILING FITTINGS



izeInches	1/2	34	1	1 1/4	1 1/2	2	2 1/2	_3
1 Stair Rail Tees, Adj		.45	.65	1.00	1.15			
2 Stair Rall Crosses, Adl		.00	.00	1.20	1.00			
3 Hand Rail Ends, drive into pipe 4 Rosette Plates			. 18	. 20	. 30	. 40		
5 Plain Ceiling or Wall Plates	.11	.13	. 16	. 18	. 23	.27	.36	
6 Loafer Cushions, 18 in, long			.30	30	.30	.30		
7 Scroll Ornaments, drilled for screws 8 Gate Centre Pieces (only)			1.00	1.50				
9 Self-Closing Gate Latches			.70	.80	.90	1.00		
1 Foot Rail Brackets, Black	.70	.80	90	1.10	1.30	1.40		11
3 Foot Rail Brackets, Black			. 11					
4 Foot Rail Brackets, Black			.12					
5 End for Foot Rail, drives into pipe 6 Stair Rail Ends, drive into fitting	.15	.15	.20	1.00	1 75	2 00		



#### RAILING FLANGES, DRILLED



PLATE A

#### CAST IRON

Pipe SizeInches	14	3 8	1/2	34	1	11/4	1 1/2	2
Diameter, 2½ Inches	.14	.14	. 15	.18				
Diameter, 3 Inches		1.17	17	1.8	. 20	23		
Diameter, 4 Inches		. 20	. 20	21		.25	. 28	
Diameter, 5 Inches			3.1	3.3	. 33	.35	.36	
Diameter, 5½ Inches					50	50	.42	. 43
Diameter, 6½ Inches						.62	. 62	. 63

#### BRASS

SizeInches	½ x 3	1/2 x 3 1/2	½ x 4	34 x 3	<sup>3</sup> 4 x 3 ½
Price			1.80		
SizeInches	34 x 4	34 x 5	1 x 3	1 x 3 ½	1 x 4
Price	1.75	2.35	1.40	1.60	2.00
SizeInches	1 x 5	1 1/4 x 4	1 1/4 x 4 1/2	1 1/4 x 5	1 1/4 x 6
Price	2.50	2.00	2.40	2.70	3.10
SizeInches	1 ½ x 4	1 ½ x 5	1 ½ x 6	2 x 5	2 x 6
Price	2.25	2.80	3.60	3.30	4.20

#### ADJUSTABLE RAILING FITTINGS



DIATE S



PLATE C



PLATE D



----



DIATE

#### IRON

SizeInches	1	1 1/4	$1\frac{1}{2}$	2
Plate B. Plate C. Plate D. Plate E. Plate F.	1.10 $1.30$ $1.50$ $1.30$ $1.50$	1.25 1.50 1.75 1.60 1.85	1.70 2.00 2.35 2.15 2.50	2.25 2.50 2.75 2.50 2.75

GALVANIZED, DOUBLE LIST



#### Brass Railing FITTINGS, FINISHED FOR FENCES ENCLOSING ENGINES AND MACHINERY



ELBOW



ELBOW, SIDE OUTLET



TEE



TEE, SIDE OUTLET



PLATE E CROSS



CROSS, SIDE OUTLET FLOOR FLANGE



PLATE I ACORN BUSHING ORNAMENT

Size Inches	1/2	3/4	1	1 1/4	1 1/2	2	21/2	3
Elbow	.40	.60	.80	1.20	1.60	2.20	4.00	7.00
Elbow, Side Outlet	.75	1.00	1.45	1.65	2.05	$\frac{2.90}{2.75}$	6.00	$\begin{bmatrix} 8.50 \\ 8.50 \end{bmatrix}$
Tee, Side Outlet	$\frac{.60}{1.05}$	$\frac{.85}{1.25}$	$\frac{1.10}{1.50}$	$\frac{1.70}{2.00}$	$\frac{2.00}{2.30}$	3.25	7.00	10.00
Cross	$\frac{1.05}{1.05}$	1.25	1.50	2.00	2.40	3.25	7.00	10.00
Cross, Side Outlet	1.20	1.45	1.70	2.12	2.60	3.50	8.00	11.50
Floor Flange	.26	.35	.40	.70	.95	1.30	2.00	3.00
Acorn Ornament	.40	.65	.80	.90	1.20	2.50	5.00	7.00
Bushing, reduced one and two sizes	.15	.15	. 25	.35	.45	.60	1.50	2.50

#### 45° ANGLE RAILING FITTINGS MALLEABLE IRON



PLATE J



PLATE K

SizeInches	1	1 1/4	1 1/2	2	2 1/2	3
Elbow, Upper	.40	.70	.90	1.50	2.00	3.00
Elbow, Upper, Side Outlet		.80			2.30	3.40
Elbow, Lower			.95	1.60	2.00	3.00
Elbow, Lower, Side Outlet		.85	1.05	1.75	2.30	3.40
Tee	.50	. 80	1.00	1.65	2.40	3.80
Tee, Side Outlet	.70	.90	1.10	1.80	2.80	4.30
Cross	.70	.90	1.16	2.00	3.00	4.50
Cross, Side Outlet	.80	1.10	1.30	2.70	3.50	5.20
Floor Flange	.40	.50	.60	.70	1.50	2.00



# BRASS FITTINGS. MALLEABLE PATTERN



PLATE A



PLATE B



PLATE C



PLATE D RETURN BEND.



PLATE E DROP ELBOW



PLATE F DROP TEE



PLATE G STREET ELBOW.



PLATE H
RIGHT HAND COUPLING.



PLATE I
RIGHT AND LEFT HAND COUPLING.



PLATE J



PLATE K



PLATE L LOCK NUT.



PLATE M BUSHING.

Price List on following pages.



#### BRASS FITTINGS

#### MALLEABLE PATTERN. ROUGH

#### IRON PIPE THREAD

SizeInches	1 8	14	3 8	1/2	34	1	134	1 1/2	2	212	3	3 1/2	4
Elbows	.12	.17	.21	.28	.35	. 50	.85	1.10	1.50	3.50	4.50	7.00	10.00
Elbows, Reducing		. 22	.26	.35	.45	. 62	1.10	1.40	1.90	4.40	5.65	8.75	12.50
Elbows, 45°	.18	. 20	. 25	.35	. 50	.70	1.05	1.40	1.80	4.20	6.00	8.40	12.00
Street Elbows			.40	. 55	.75	1.00	1.80	2.50	3.25				
Tees	. 15	. 20	.30	. 40	. 50	.75	1.00	1.30	1.75	4.00	5.50	9.00	13.00
Tees, Reducing		. 25	.38	.50	. 63	.95	1.25	1.65	2.26	5.00	6.90	11.25	16.25
Drop Elb., Female.			.42	. 56	.70	1.00	1.70						
Drop Tees, Female.			.60	.80	1.00	1.50	2.00						
Crosses		. 30	. 40	. 50	. 60	.80	1.50	2.00	3.50	5.00	7.00	10.00	14.50
Crosses, Reducing		.38	.50	.65	.75	1.00	1,90	2.50	4.40	6.25	8.75	12.50	18.00
Y Branches			.44	. 55	1.00	1.25	2.55	2.90	4.50	6.50			
Reducing Couplings		. 16	. 22	.32	. 45	. 65	.90	1.12	1.85	3.00	4.50		
Plugs	.09	. 10	.12	. 15	. 20	.28	.40	. 50	.90	1.25	2.00	3.00	4.00
Caps	. 15	.15	. 20	. 25	.35	. 45	. 60	.80	1.10	2.00	3.00	5.00	6.00
Locknuts		. 10	.12	. 15	. 20	.30	.45	.70	. 95	1.50	2.75		
Bushings		.10	.12	. 14	.21	.38	.50	. 67	1.00	1.50	2.50		
Flush Bushings		. 10	.12	.14	.21	.38	. 50	. 67	1.00				
Couplings	. 10	. 14	. 16	.25	.37	. 50	.60	.90	1.35	2.40	3.50	5.00	6.00
Couplings, R. and L		. 17	. 20	.30	.45	. 60	.75	1.12	1.75				
Close Nipples	.12	. 15	. 20	. 25	.30	.40	. 60	.90	1.25	2.50	3.50	5.10	6.75
Shoulder Nipples	.14	. 18	. 25	.30	.38	.50	.75	1.10	1.45	2.75	4.00	6.00	8.00
Long Nipples	. 15	. 20	.30	.35	. 45	.60	.90	1.25	1.60	3.00	4.50		
Ret. Bends, close				. 56	.70	1.00	1.70	2.20	3.00				
Ret. Bends, Open				.70	.88	1.25	2.15	2.75	3.75				
N.P. Brass Elbows.		.44	. 56	.72	.84	1.20							
N.P. Br. Elb., 45°		. 50	. 64	.86	1.16	1.60							
N.P. Brass Tees		. 52	. 76	.98	1.18	1.73							
N.P. Br. Couplings.		.38	. 45	. 63	.89	1.15							
							1						

Finished Fittings double above list.



#### BRASS PIPE NIPPLES



PLATE A

Size					LEN	стн, I	NCHES				
Size	Close	$1\frac{1}{2}$	2	21/2	3	$3\frac{1}{2}$	4	4 1 2	5	$5\frac{1}{2}$	6
18 Each	.16	.16	.19	.22	.25	.28	.31	.34	.37	. 40	. 4:
14 Each	. 20	. 20	.24	.28	.32	.36	. 40	. 44	.48	. 52	. 5
38 Each	. 23	. 23	. 28	. 33	.38	. 43	.48	. 53	.58	. 63	. 68
1/2 Each	.30	.30	.36	.42	.48	. 54	.60	. 66	.72	.78	. 8
34 Each	.32		.39	. 46	. 53	. 60	. 67	.74	.81	.88	. 9.
Each	. 40		.49	. 58	. 67	.76	.85	.94	1.03	1.12	1.2
1/4 Each	. 33			. 75	.87	.99	1.11	1.23	1.35	1.47	1.5
1/2 Each	.74			.88	1.02	1.16	1.30	1.44	1.58	1.72	1.8
Each	1.00			1.19	1.38	1.57	1.76	1.95	2.14	2.33	2.5
1/2 Each	1.80				2.04	2.32	2.60	2.88	3.16	3.44	3.7
Each	2.50				2.80	3.20	3.60	4.00	4.40	4.80	5.2
1/2 Each	4.00						5.10	5.68	6.26	6.84	7.4
Each	4.75						5.86	6.53	7.20	7.87	8.5
1/2 Each							7.20	8.01	8.82	9.63	
Each	8.50									12.40	
Each								13.65	15.05	16.45	17.8



#### PLATE E

### BRASS UNIONS

SizeInches	1.8	14	3/8	1/2	34	1
Each	.32	.36	. 50	.70	. 90	1.25
SizeInches	1 1/4	1 1/2	2	2 1/2	3	
Each	1.70	2.50	3.60	6.00	7.75	

#### BRASS FLANGE UNIONS, ROUGH



PLATE C

Size In. 1/2	34   1	1 1/4	1 1/2	2	21/2	3	3 1/2	4	4 1/2	- 5	6
											-
Price 3.50	3.50 4.10	5.00	5.75	8.25	9.75	14.50	17.50	22.50	25.00	29.00	35.00

#### EXTRA HEAVY BRASS FITTINGS.

MADE FROM CAST IRON FITTING PATTERNS



PLATE A



PLATE B



PLATE C CROSS.

#### CAST IRON PATTERN--ROUGH.

FOR IRC	N F	IPE
---------	-----	-----

SizeInches	3/8	1/2	34	1	1 1/4	1 1/2	2	$2\frac{1}{2}$	3	3 ½	4
Elbows Each	.36	. 50	.85	1.05	1.65	2.10	3.00	5.50	8.50	12.50	16.00
Elbows, 45° Each		. 45	.84	1.20	1.80	2.40	3.60	6.60	10.20	15.50	20.00
Elbows, Reducing . Each	.42									14.50	
Elbows, R. and L Each	.32										
Tees Each	.40	.65	1.00	1.50	2.00	3.00	4.50	7.50	i1.00	16.50	20.00
Tees, ReducingEach	.46	.75	1.15	1.70	2.30	3.45	5.20	8.60	12.65	17.50	23.00
Crosses Each		. 90	1.30	1.80	2.75	4.00	5.25	9.00	14.00		
Crosses, Reducing . Each		1.04	1.50	2.10	3.15	4.60	6.00	10.35	16.00		
Ret. Bends, Close Each		1.00	1.15	1.50	2.30	3.30	4.50				
Ret. Bends, Open., Each		1.00	1.25	2.00	3.25	4.50	6.00				
Couplings, Heavy Each	.35	. 50	.75	1.00	1.40	1.80	2.75	4.80	7.00		

Caps, Locknuts, and Couplings furnished from Cast Iron Patterns when desired. We can furnish from this pattern any reducing sizes of Brass Fittings that are made in cast iron, at special prices.

Made in sizes up to 10 inch. Special prices on application.

#### OCTAGON BRASS UNIONS.

GROUND JOINT



PLATE D



PLATE E

	-					-						
SizeInches	1/8	1/4	3/8	1/2	34	1	11/4	1 ½	2	2 1/2	3	
RoughEach FinishedEach		. 40	. 55 . 75	.75 1.00	1.00	1.40	$\frac{1.90}{2.50}$	$\frac{2.75}{3.00}$	4.00 4.50	6.50	8.50	



#### STANDARD BRASS GLOBE & ANGLE VALVES



PLATE A GLOBE, SCREWED



PLATE B ANGLE, SCREWED



PLATE C GLOBE, FLANGED

SizeInches	1 8	1/4	3/8	1/2	34	1	1 1/4	1 1/2
Globe and Angle Valves, Screwed. Globe and Angle Valves, Flanged.	.72	.72	.77	$\frac{1.00}{4.50}$	$\begin{bmatrix} 1.26 \\ 5.00 \end{bmatrix}$	$\frac{1.80}{6.75}$	2.52 8.50	$\frac{3.50}{10.50}$
SizeIncl							5	6
Globe and Angle Valves, Screwed. Globe and Angle Valves, Flanged.	1	$5.30 \\ 6.00$	$\frac{10.00}{23.00}$	$\frac{14.40}{35.00}$	$26.50 \\ 50.00$	$\frac{36.00}{70.00}$	125.00	200.00

#### FINISHED GLOBE, ANGLE & CHECK VALVES



PLATE D

SizeIı	nches 1/8	1/4	3/8	1/2	34	1
Globe and Angle, Brass Wh Globe and Angle, Brass W	eel 2.2	52.25	2.50	3.15	3.50	4.2
Plated All Over	2 . 6	02.60	3.00	3.70	4.10	4.90
Globe and Angle, Wood Wh Globe and Angle, Wood W	eel 1.6	01.60				
Plated All Over	1 . 8	51.85				
Check Valves, Horizontal	1 . 4	51.45				
Check Valves, Angle Extra Heavy Globe and A	ingle.	01.50				
Brass Wheel	2.7	52.75	3.20	4.00	4.75	6.0
E. H. Globe and Angle, V	V. W. 2.1	52.15	$\frac{2.50}{2.50}$	3.00	$\frac{3.75}{2}$	5.0
Ex. Heavy Check, Horizont	a1 2.0	0,2.00	2.30	2.75	3.50	4.6
SizeI	nches 1½	4 1 1/2	2	_   2	2 1/2	3
Globe and Angle, Brass Wh Globe and Angle, Brass W	eel. 5.6	0 7.0	00 10.	25 22	2.00	33.0
Plated All Over	6 . 3	0 7.7	5 11.	25 24	1.00	36.0
Globe and Angle, Wood Wh	eel 4.3	5 5.7	5 9.	00 20	0.00 3	30.0
Globe and Angle, Wood W	heel,	0 0 0				
Plated All Over Check Valves, Horizontal	4.8	0 6.2	25 9.			
Check Valves, Angle	1 9	$\begin{array}{c c} 0 & 5.2 \\ 5 & 5.5 \end{array}$			$\frac{3.00}{0.00}$	
Extra Heavy Globe and A	ngle.	9.0	3.	00 18	.00 -	.0.0
Brass Wheel	8.3	0 10.5	0 15.	50 32	2.00 4	15.0
E. H. Globe and Angle, W	V. W. 7.0	0 9.2	5 14.	25 30	0.00 4	13.0
Extra Heavy Check, Horizo	intal 6 5	0 8 5	0 13.	95 98	00.4	0 01



#### STANDARD BRASS CROSS VALVES



#### DIATE A

_												
Size. Inches	1/4	3 8	1.2	34	1	1 1/4	$1\frac{1}{2}$	2	2 1/2	3	. 3 1/2	4
	-											
Screwed	1.25	1.25	1.50	2.00	2.50	3.50	5.00	8.00	16.00	24.00	45.00	60.00
Flanged					9.00	12.00	15.75	22.00	33.00	[45.00]	75.00	100.00



# EXTRA HEAVY BRASS GLOBE, ANGLE AND CHECK VALVES



PLATE B

PLATE C ANGLE VALVE

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
Screwed 1.25 1.45 1.85 2.50 3.50 5.25 7.00 10.50 20.00 27.00 50.00 65.00	Size Inches	1/4	3.8	1/2	3 4	1	1 1/4	1 1/2	2	21/2	3	3 1/2	4
Screwed 1.25 1.45 1.85 2.50 3.50 5.25 7.00 10.50 20.00 27.00 50.00 65.00	Globe and Angle:												
Flanged 6.50 7.75 10.00 13.50 17.00 27.00 37.00 30.00 75.00 115.00 Check. Screwed 1.10 1.25 1.65 2.25 3.15 4.75 6.25 9.50 18.00 25.00 45.00 58.00	Scrowed	1 95	1.45	1.85	2.50	3.50	5.25	7.00	10.50	20.00	27.00	50.00	65.00
	Flanged Check. Screwed	1.10	1.25	1.65	$\frac{7.75}{2.25}$	3.15	4.75	6.25	9.50	18.00	25.00	$45.00 \ 45.00$	58.00

#### DOUBLE EXTRA HEAVY

SizeInches	3/8	1/2	34	1	1 1/4	1 1/2	2
Globe and Angle Valves, Screwed Globe and Angle Valves, Flanged	2.00	3.00	5.00	$\frac{7.00}{12.00}$	$\frac{9.00}{15.00}$	$\frac{12.00}{20.00}$	$\frac{16.00}{27.00}$
SizeInches	21/2	3	3 1/2	4	4 1/2	5	6
Globe and Angle Valves, Screwed Globe and Angle Valves, Flanged	$\frac{28.00}{37.00}$	38.00 55.00	$72.00 \\ 100.00$	$94.00 \\ 115.00$	$\frac{125.00}{140.00}$	$145.00 \\ 175.00$	$215.00 \\ 245.00$

#### POWELL WHITE STAR VALVES.



With Renewable White "Powelium" Bronze Seats and Projecting Packing Glands Regrindable, Reversible, Renewable Discs, Steam Bronze Composition. For steam working pressure up to 200 pounds.

Size		Inches	1/4	3/8	1/2	3/4	1
		S. E F. E		$\frac{1.75}{3.85}$	2.20 5.65	3.00	
Angle	Valves,	S. E F. E	1.50	$\frac{1.75}{3.85}$	$\frac{2.20}{5.65}$	3.00	3.80
Cross	Valves,	S. E F. E	2.25	2.25	$\frac{3.10}{7.90}$	3.65	
Size		Inches	1 1/4	1 ½	2	2 1/2	3
		S. E F. E				18.75	
Angle	Valves,	S. E F. E	5.20	7.00	11.00	18.75	26.50
Cross		S. E	6.40	9.00	15.60	26.20	39.20

PLATE A SCREW ENDS

### POWELL REGRINDING MODEL STAR VALVES. STEAM BRONZE COMPOSITION

FOR STEAM WORKING PRESSUSE UP TO 200 POUNDS



PLATE B GLOBE, SCREWED



PLATE C ANGLE, FLANGED

SizeInches	1/8-1/4	3/8	1/2	34	1	1 1/4	1 1/2	2	21/2	3
Screw Ends Flange Ends	2.70	2.85	1.15	1.45	2.00	2.80	3.90	6.20	12.00	16.50

#### POWELL UNION COMPOSITE DISC VALVES.

#### STEAM BRONZE COMPOSITION



PLATE A
GLOBE VALVE



PLATE B ANGLE VALVE



PLATE C



PLATE D DISC HOLDER



PLATE E COMPOSITE DISC



DISC NUT

#### PRICE LIST

SizeInches	18-14	3 8	1/2	34	1	1 34	1 1/2	2	2 1/2	3
Plate A, Globe Valves. Plate B, Angle Valves. Plate C, Cross Valves. Plate D, Disc Holder. Plate E, Composite Disc. Plate F, Soft Metal Disc. Plate G, Bronze Metal Disc. Plate H, Disc Nut.	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
	1.70	2.00	2.25	2.50	3.25	4.75	6.25	9.50	20.00	27.50
	.20	.30	.45	.60	.75	1.00	1.45	2.15	2.60	3.60
	.03	.04	.04	.05	.06	.09	.12	.18	.24	.40
	.06	.06	.07	.08	.10	.13	.18	.22	.50	.76



# POWELL STRAIGHTWAY Y-BLOW-OFF VALVES.

WITH REVERSIBLE DISCS INSERTED SEAT RINGS.
STEAM BRONZE COMPOSITION

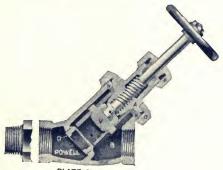


PLATE A

### MODEL STAR-FOR STEAM WORKING PRESSURE UP TO 175 POUNDS.

SizeInches	34	1	1 1/4	1 1/2	2	21/2	3
Double Female or Male and Female	3.00	4.00	5.00	6.50 13.00	$9.25 \\ 20.00$	18.00 28.00	$\frac{25.00}{37.00}$

Also made with White Star and Union, Discs.

GLOBE VALVE.

# JENKINS DISC, BRASS GLOBE AND ANGLE VALVES.

Size	Inches	1/8	1/4	38	1.2
Globe and Angle Valve Globe and Angle Valve	es, Screwed es, Flanged	1.10	$\frac{1.10}{3.50}$	$\frac{1.25}{4.00}$	1.60
Size					
Globe and Angle Valve Globe and Angle Valve	s Scrowed	2 20	2 80	4 00	= =0
Size					
Globe and Angle Valv Globe and Angle Valv	es, Screwed es, Flanged	8	$.751 \\ .502$	$\frac{5.75}{5.00}$	$\frac{-}{22.00}$ $\frac{34.00}{}$

# CJ. Painear. &. Co. 3



#### POWELL U. S. GATE VALVES.

FOR STEAM WORKING PRESSURE UP TO 100 POUNDS.

SizeInches	14	3 8	1/2	34	1
Plate AEach	1.25	1.25	1.30	1.75	2.50
SizeInches	1.14	1 1/2	2	2 1/2	3
Plate A Each	3.50	5.00	7.50	14.00	20.00

PLATE A

POWELL WHITE STAR GATE VALVES.

DOUBLE WEDGE DISCS, SELF-ADJUSTING RISING STEMS.

WITH PATENT UNION BONNET, PROJECTING PACKING GLAND

FOR STEAM WORKING PRESSURE UP TO 150 POUNDS

Size	Inches	1/4	38	1/2	3.4	1
Plate B—Scr Plate B—Fla	rew Ends	1.25	$\frac{1.25}{2.50}$	1.30	1.75 4.00	$\begin{bmatrix} 2.50 \\ 5.25 \end{bmatrix}$
Siz	Inches	1 1/4	1 1/2	2	2 1/2	3
Plate B—Sci Plate B—Fla	rew Ends	$\frac{3.50}{7.75}$	$\frac{5.00}{10.59}$	$\frac{7.50}{14.00}$	$\frac{14.00}{21.00}$	$\frac{20.00}{32.00}$



PLATE B

# POWELL PATENT READY LEVER THROTTLE VALVES. STEAM BRONZE COMPOSITION FOR STEAM WORKING PRESSURE UP TO 75 POUNDS

Size Inches	12	34	1	1 1/4
Plate CEach	1.60	1.80	2.50	3.50
Size Inches	1 1/4	2	2 1/2	3
Plate C Each	5.00	7.50	13.50	19.00

### TITAN PATTERN 175 POUNDS WORKING PRESSURE

SizeInches	1/2	3/4	1	1 1/4
Plate CEach	2.50	3.00	4.00	5.00
SizeInches	1 1/2	2	21/2	3
Plate CEach	7.00	10.00	19.00	29.00



PLATE C



# POWELL BRASS UNION DISC CHECK VALVES





PLATE A HCRIZONTAL

PLATE B

SizeInches	1/4	38	1/2	34	1	11/4	1 1/2	2	2 1/2	3
Plate A—HorizontalEach Plate B—AngleEach	1.10 1.10	$\frac{1.20}{1.20}$	$\frac{1.30}{1.30}$	$\frac{1.90}{1.90}$	$\frac{2.60}{2.60}$	$\frac{3.60}{3.60}$	${5.00}$	$\frac{-}{7.50}$	13.50 13.50	$\frac{21.00}{21.00}$

#### STANDARD BRASS CHECK VALVES.



PLATE C HORIZONTAL



PLATE D



PLATE E ANGLE CHECK

Size Inches	18	1/4	3/8	1/2	34	1	1 1/4	1 1 1 2
Horizontal, Screwed	.65	.65	.70	.90	1.15	1.60	2.25	3.15
Horizontal, Flanged. Vertical and Angle, Screwed.	.72	. 72	. 77	1 1 00			8.25	10.13
Vertical and Angle, Flanged Horizontal, with Drip Cock,				4.50			8.50	10.50
Screwed				$\frac{2.15}{1.85}$	$\frac{2.55}{2.50}$		$\frac{4.05}{4.15}$	5.40
SizeInches	2	2 1/2	3	3 1/2		5	6	0.00
Horizontal, Screwed	4.75	9.00	13.00	24.00	32.50			
Vertical and Angle, Screwed	$\frac{15.50}{5.30}$	10.00	33.50	26.50	36.00	120.00	190.00	
vertical and Angle, Flangen	16 00	23 00	35 00	50 00	70 00	195 00	200 00	
Vertical, Cap on Side, Screwed	7.25	18.00	25.00					



PLATE F

# STANDARD BRASS SWING CHECK VALVES

SizeInches	3/8	1/2	34	1	1 1/4	
Screw Ends	1.30	1.50	1.75	2.25	3.25	
SizeInches	1 1/2	2	2 1/2	3		
Screw Ends	4.25	6.25	12.00	20.00		

# CJ. Painear. &. Co.



## BRONZE HOSE GATE VALVES. STATIONARY STEM.

FOR MEDIUM HEAVY PRESSURES.

Size	Inches	3/-	í	1		1	1/4	1	1/2		2	$2\frac{1}{2}$	3
With Iron V			75	2.	50	3.	50	5	.00	7	. 50	14.00	20.00
With Finish Wheel With Finish		3.	25	4.0	)5	5.	50	7.	.10	10	.30	18.00	25.00
Wheel M	& F. Hose	9			0.0	G	10	7	85	11	15	19.00	26 25
	Wheel M. Thread.												
Extra for Chain	Cap and	1	95	1 .	0.5	1	25	1	50	1	75	2 50	3.5/

These valves have rough bodies and finished trimmings.

PLATE A

### HOSE END VALVES.

SizeInches	1	1 1/4	$1  {}^{1\!\!}/_2$	2	$2.1_{2}$	3
Globe and Angle Each Globe and Angle, Finished		4.70	6.50	9.15	17.10	23.35
with Brass Wheel., Each	4.55	5.95	8.50	11.65	21.10	28.35

Also Finished and Nickel Plated all over; prices on application.



PLATE B

### COMPRESSION SILL COCKS.



PLATE C

Size	Inches	3/4
Finished		31.80. 35.40

Add for Caps, \$4.00 per dozen. Also furnished with Loose Key instead of Wheel

## STANDARD BRASS SAFETY VALVES



PLATE A

SizeInches	1/2	34	1	11/4	1 1/2	2	214	3
Screwed	3.25	3.90	4.70	7.15	9.00	12.50	22.50	33.50
Flanged	7.00	8.90	11.20	15.50	19.75	26.50	39.50	54.50
Angle, Screwed	3.25	3.90	4.70	7.15	9.00	12.50	22.50	33.50
Angle, Flanged	6.75	7.65	9.65	13.15	16.00	23.30	35.50	53.00

## LOW PRESSURE SAFETY VALVES



PLATE B
WITH BALANCE WEIGHT



PLATE C WITH BALL ON TOP

SizeInches	1/2	34	1	1 14	1 1/2	2
With Balance Weight Each Ball on Top					9.50 5.50	12.35
Ball on Top, Angle Pattern Each	2.25	2.60	3.30	4.50	6.35	8.65

## STANDARD IRON BODY GLOBE AND ANGLE VALVES

BRASS MOUNTED. PLAIN TOP



PLATE A GLOBE, SCREWED



ANGLE, SCREWED



PLATE C GLOBE, FLANGED



PLATE D ANGLE, FLANGED

SizeInches	1	1 1/4	1 ½	2	21/2	3
Screwed, Angle and Globe Flanged, Angle and Globe	$\frac{2.25}{3.25}$	$\frac{2.75}{3.85}$	3.50 4.80	$\frac{5.40}{7.00}$	7.35 9.00	9.80 12.50



## STANDARD IRON BODY GLOBE AND ANGLE VALVES

BRASS MOUNTED. YOKE TOP



PLATE A GLOBE, SCREWED



ANGLE, SCREWED



PLATE C GLOBE, FLANGED



PLATE D ANGLE, FLANGED

SizeIr							4 1/2	5	6
Screwed, Globe and A Flanged, Globe and A	11910	.00	10.10	10.00	18.50	22.50	27.50	1.31 00 1	37.50 42.00
SizeIr	iches	7	8	9	10	12	14	16	
Screwed, Globe and A Flanged, Globe and A	ngle. 68	3.00 3.00	$\frac{72.00}{77.00}$	100.00 110.00	114.00 $123.00$	$\frac{170.00}{187.00}$	350.00	475.00	



## STANDARD IRON BODY CROSS VALVES

BRASS MOUNTED



PLATE A
CROSS, SCREWED
PLAIN TOP



PLATE C CROSS, FLANGED, YOKE TOP



PLATE B CROSS, SCREWED, YOKE TOP

SizeInches	2	$\frac{2}{1}$	3	$3\frac{1}{2}\frac{7}{2}$	4	41/2	5	6
Screwed, Plain Top Flanged, Plain Top Screwed, Yoke Top Flanged, Yoke Top	9 00	11.75	16.50					
SizeInches	7	8	9	10	12	14	16	
Screwed, Yoke Top Flanged, Yoke Top	78.00 85.00	$92.00 \\ 100.00$	$150.00 \\ 163.00$	$162.00 \\ 175.00$	$\frac{240.00}{265.00}$	475.00	700.00	



## POWELL UNION COMPOSITE DISC VALVES.

WITH OUTSIDE SCREW STEM AND YOKE TOP
IRON BODY. HEAVY PATTERN.



PLATE A
GLOBE VALVE
SCREW ENDS



PLATE B ANGLE VALVE FLANGE ENDS

### GLOBE AND ANGLE VALVES

SizeInches	2	2 1/2	3	3 1/2	4	$4^{\frac{1}{1}}_{2}$	5	6	7 8
Screw Ends									
Flange Ends									
Comp'n Disc	. 18	. 24	.40	. 50	. 60	.70	.80	1.00	1.20 1.40
Soft Metal Disc	. 22	. 50	.76	. 90	1.35	1.60	1.85	2.35	2.50 3.25
Bronze Met. Dis									
Disc Holder									
Disc Nut	.15	. 20	. 25	. 40	. 60	.85	1.25	1.75	2.25 3.00

#### CROSS VALVES

SizeInches	$2\frac{1}{2}$	3	3 1/2	4	4 1/2	5	6	7	8
Screw Ends	16.00	21.00	26.00	30.00	42.00	45.00	50.00	90.00	100.00
Flange Ends	19.00	24.00	29.00	33.00	45.00	48.00	62.00	90.00	100.00

### CHECK VALVES

SizeInches	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	4 1/2	5	6	7	8
Horizon., S. E	8.00	11.00	14.00	17.00	20.00	25.00	30.00	40.00	65.00	80.00
Horizon. F. E	10.00	13,00	16.50	20.00	23.00	28.00	33.00	43.00	65.00	80.00
Angle, S. E	8.00	$11.00 \\ 13.00$	$\frac{14.00}{16.50}$	$\frac{17.00}{20.00}$	$\frac{20.00}{23.00}$	$\frac{25.00}{28.00}$	30.00 $33.00$	$\frac{40.00}{43.00}$	65.00 $65.00$	80.00

# POWELL PATENT CYCLONE BLOW-OFF VALVE.

IRON BODY.

REGRINDABLE, REVERSIBLE, RENEWABLE

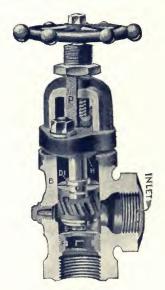


PLATE A

Both Discs and Seats are made of White "Powelium" Bronze, and having two faces, are Regrindable, Reversible and Renewable.

SizeInches	1 1/4	1 1/2	2	2 1/2	3
Fig. 550—Screw Ends. Fig. 551—Flange Ends. Fig. 552—"Powelium" White Metal Discs. Fig. 553—"Powelium" White Metal Seat Rings. Fig. 554—Disc Holders. Fig. 555—Disc Nuts.	.80 1.00 1.40	1.00 1.20 1.85	1.35	2.25 2.80 5.00	3.3 3.9 9.0



## IRON BODY THROTTLE VALVES



Size Inches	1	1 1/4	1 1/2	2
Screwed Flanged	10.00 11.00			
SizeInches	21/2	3	3 1/2	4
Screwed Flanged	30.00 32.00	40.00 42.50		
SizeInches	$4^{1}\frac{1}{2}$	5	6	7
Screwed Flanged	88.00 91.00	106.00 110.00	$120.00 \\ 125.00$	140.00 145.00

PLATE A

# STANDARD IRON BODY SAFETY AND BACK PRESSURE VALVES

BRASS MOUNTED

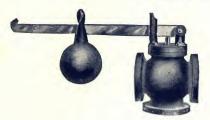


PLATE B SAFETY



PLATE C BACK PRESSURE

#### SAFETY VALVES

SizeInches	1	11/4	1 1/2	2	2 1/2	3	3 ½
Screwed	4.00	5.00	5.80	7.80 10.25	13.25 16.00	17.25 21.50	$\frac{23.00}{27.50}$
SizeInches				6	7	8	
ScrewedFlanged	$\frac{28.75}{34.00}$	34.50 40.00	41.50 48.00	57.75 65.00	93.50 100.00	132.00 140.00	

#### BACK PRESSURE VALVES

SizeInches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
Screwed Flanged	$\frac{9.00}{10.50}$	$11.00 \\ 12.75$	13.00 15.00	15.00 17.50	19.00 22.00	22.50 26.00	$\frac{28.50}{32.00}$	33.50 37.00
SizeInches	6	7	8	9	10	12	14	16
Screwed Flanged			85.00 90.00	110.00 120.00	120.00 130.00	180.00 200.00	350.00	475.00



# STANDARD IRON BODY CHECK VALVES BRASS MOUNTED



PLATE A
HORIZONTAL CHECK, SCREWED



PLATE B ANGLE CHECK, SCREWED

SizeInches	1	1 1/4	1 1/2 2	2 1/2	3	3 1/2	4 4	5
Hor. and Angle, Screwed. Hor. and Angle, Flanged. Vertical, Screwed. Vertical, Flanged.	2.50	3.25 4	.00 5	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$11.50 \\ 12.50$	15.50	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$50 \mid 26.00 \\ 00 \mid 33.00$
SizeInches	6	7	8	9	10	12	14	16
Hor. and Angle, Screwed. Hor. and Angle, Flanged. Vertical, Screwed. Vertical, Flanged.	$\frac{35.00}{40.00}$	$\begin{vmatrix} 50.00 \\ 62.00 \end{vmatrix}$	$62.00 \\ 73.00$	105.00	115.00	175.00	300.00	425.00

## IRON BODY BRONZE MOUNTED SWINGING CHECK VALVES

SizeInches	2 1/2	3	$3\frac{1}{2}$	4	5	6	7	8	10	12
Screwed	15.00	18.00	24.00	27.00	38.00	48.00	62.00	75.00	125.00	220.00
Flanged Bell Ends	17.00	21.00	27.00	30.00	42.00	52.00	67.00	80.00	135.00	220.00

## IRON BODY P. & C. CHECK VALVES STRAIGHTWAY SWINGING

SizeInches	2	2 1/2	3	3 1/2	4	4 1/2	5
Flanged	6.25	10.00		16.00 16.00	18.00 18.00 18.00	21.50 21.50	$25.00 \\ 25.00 \\ 25.00$
SizeInches	6	7	8	10	12	14	16
FlangedScrewedBell Ends	32.00	41.00 41.00 41.00	50.00 50.00 50.00	104.00 104.00 104.00			

## IRON BODY ANGLE CHECK VALVES STRAIGHTWAY SWINGING

SizeInches	21/2	3	3 12	4	5	6	7	8
Screw Ends Flange Ends	10.00 10.00	12.00 12.00	16.00 16.00			32.00 32.00		



## IRON FOOT VALVES WITH STRAINERS



PLATE A SCREWED



FLANGED

SizeInches	34	1	11/4	1 1/2	2	21/2	3	3 1/2	1   4 1/2
Diameter of FlangesInches							. 71/2	81/2	9 1/4
Screwed, Painted Each Screwed, Galvanized. Each Flanged, Painted. Each Flanged, Galvanized. Each	.60	.60	.75	.00	1.45	2.00	$\frac{0}{2}.70$	$\frac{3.904}{3.003}$	$\frac{25}{60}$ 6.00
SizeInches 5	6		8	10		12	14	15	1 16
Diam. of FlangesIn. 10	11	$12\frac{1}{2}$	13 ½	16	3	19	21	22 1/4	23 1/2
Screwed, Painted Each 4.25 Screwed, Galv'd Each 6.50 10 Flanged, Painted Each 5.00 Flanged, Galv'd Each 7.50 12	$\frac{0.00}{3.00}$	$\frac{30.00}{16.50}$	$\frac{30.00}{16.50}$	$\frac{50.0}{30.0}$	$\begin{array}{c c} 00 & 90 \\ 00 & 60 \end{array}$	.00	150.00 $120.00$	160.00 $135.00$	145 00

## SCREWED ONLY

CAST IRON STRAINERS STEAM METAL FOOT VALVES AND STRAINERS. SCREWED



PLATE C



PLATE D

### CAST IRON STRAINERS. SCREWED ONLY

SizeInches	34	1	1 1/4	132	2	2 1/2	3	3 1/2	4	4 1/2	5	. 6	8
PaintedEach GalvanizedEach	.30	.40	.50	$\frac{.75}{1.00}$	$\frac{1.00}{1.50}$	$\frac{1.50}{2.00}$	$\frac{2.00}{3.00}$	$\frac{3.00}{4.50}$	$\frac{3.75}{6.00}$	$\frac{4.75}{7.00}$	$\frac{-}{4.75}$ $\frac{4.75}{7.00}$	6.50	$\frac{-15.00}{20.00}$

### STEAM METAL FOOT VALVES AND STRAINERS. SCREWED

SizeInches	1/2	34	1	11/4	1 1/2	2	21/2	3
PriceEach								



## IRON BODY EXPANSION JOINTS



### BRASS SLEEVE

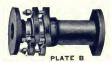


PLATE A
SCREWED. REGULAR TRAVERSE

FLANGED. REGULAR TRAVERSE

STANDARD, SCR	EWED	). R	EGUL	AR TE	RAVER	SE	
SizeInches			3	3 1/2	4	4 1/2	5
Length of TraverseInches	6	6	6	6	6	6	6
Screwed, Standard	11.00	13.00	17.50	25.00	30.00	40.00	45.00
SizeInches				9		12	
Length of TraverseInches	6	6	7	7	7	8	
Screwed, Standard	55.00	70.00	100.00	110.00	160.00	225.00	

Inches	7.00	8.00	10.00					6
e,			-10.00					
0								
e				14.00	18.00			
e	1						38.00	45.00
e	18.50	22.00	29.00	41.00	48.00	00.00	10.00	92.0
e	23.50	28.00	37.00	50.00	60.00	75.00	86.00	
	e e	e	e	$egin{array}{llllllllllllllllllllllllllllllllllll$	e 18.50 22.00 29.00 41.00 e 21.00 25.00 33.00 45.00 e 23.50 28.00 37.00 50.00	e. 18.50 22.00 29.00 41.00 48.00 e. 21.00 25.00 33.00 45.00 54.00 e. 23.50 28.00 37.00 50.00 60.00	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$egin{array}{cccccccccccccccccccccccccccccccccccc$

STANDARD	, FLA	NGE	). R	EGUL	AR TE	RAVER	SE	
SizeInches	2	2 1/2	3	3	4	4 1/2	ъ	6
Length of Traverse In .	6	6	6	6	6	6	6	6
Flanged, Standard	18.00	20.00	25.00	35.00	40.00	50.00	55.00	65.00
Size Inches		8	9	10	12	14	15	16
Length of Traverse In .	6	7	7	7	8	10	10	10
Flanged, Standard	80.00	110.00	120.00	175.00	250.00	500.00	500.00	600.00

	STANDARI	D, FL	ANGE	D S	PECIA	L TRA	VERS	Ε	
Traverse	SizeInches	2	2 1/2	3	3 1/2	4	4 1/2	5	6
2 ½ 2 34 3 3 14 4 5 10 12 14 16 18	Price.	23.00 25.50 28.00 30.50	26.00 29.00 32.00 35.00	32.50 36.50 40.50 44.50	25.00 45.00 50.00 55.00 60.00	30.00 52.00 58.00 64.00	63.00 70.00 77.00 85.00	72.00 80.00 88.00 96.00	55.0 90.0 102.5



### BRASS EXPANSION JOINTS



PLATE A

### STANDARD OR WESTERN TRAVERSE

Size Inches	$\frac{1}{2}$	34	1	1 1/4	1 1/2	2	2 1/2	3
TraverseInches	2	2 1/4	2 14	2 1/4	2 1/4	2 1/2	2 1/2	2 34
Price	1.50	2.20	2.75	4.00	5.00	8.00	17.50	24.00

#### EASTERN TRAVERSE

SizeInches	1/2	34	1	1 1/4	1 1/2	2	2 1/2	3
Traverse, Inches	-1	4	4	4	4	4	5	5
Price	3.80	4.00	4.90	6.30	7.40	9.10	20.00	28.00

#### SPECIAL TRAVERSE

Size	Inches	3.4	1	-1.14	1.12	2	$2\frac{1}{2}$
Traverse, 6 inches Traverse, 8 inches	Each	8.25	9.00	10.00	11.50	13.50	24.00
Traverse, 10 inches Traverse, 12 inches	Each	9.75	11.00	12.50	14.50	17.50	

Note.—The expansion will average about one inch in 50 feet of pipe.

### BRASS SWING JOINTS



PLATE B

SizeI	nches 1/4	3/8	1/2	34	1	1 14	112	2
RoughFinished	Each 1.0 Each 1.2	$ \begin{array}{c c} 1.25 \\ 5 & 1.50 \end{array} $	$\frac{1.75}{2.00}$	$\frac{2.40}{2.75}$	3.50 4.00	4.50 5.00	6.25	9.00



## STANDARD IRON BODY BRASS MOUNTED GATE VALVES.

STATIONARY STEM.



PLATE A SCREWED.



PLATE B FLANGED.

### SCREWED OR FLANGED.

SizeInches	2	2 1/2	3	3 1/2	4	412	5
Each,	10.00	12.00	15.00	18.00	20.00	23.00	25.00
SizeInches	6	7	8	9	10	12	
Each	30.00	45,00	55.00	80.00	90.00	125.00	



PLATE C HUB ENDS.

To open by turning stem to left and with a 2-inch square nut on stem unless otherwise ordered.

These valves are specially constructed for street mains to withstand rough u-age incidental to such service.

SizeInches	2	3	4	5
Each	10.00	15.00	20.00	25.00
Size Inches	6	8	10	12
Each	30,00	55.00	90.00	125.00



# STANDARD IRON BODY BRASS MOUNTED GATE VALVES.



### SCREWED OR FLANGED

Size.Inches	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	4 1/2	5
Priceeach	20.00	23.00	28.00	33.0	0 40.0	0 46.00
Size.Inches	6	7		8	10	12

PLATE A
OUTSIDE RISING STEM AND YOKE.

### SCREWED OR FLANGED.

SizeInches	$2\frac{1}{2}$	3	3 1/2	4
Priceeach	18.00	22.00	25.00	27.00
SizeInches	$4\frac{1}{2}$	5	6	7



PLATE B RISING STEAM AND LEVER.

# HEAVY IRON BODY BRASS MOUNTED CATE VALVES.

FOR STEAM PRESSURE UP TO 160 POUNDS.



PLATE A INSIDE STEM.



PLATE B OUTSIDE STEM AND YOKE.

SizeInches	2 1 2	3	3 1/2	4	4 1/2	5
Inside Stem, Screwed or Flanged Outside Stem and Yoke, Screwed or	12.00	15.00	18.00	20.00	23.00	25.00
Flanged	20.00	23.00	28.00	33.00	40.00	46.00
Size	Inches	6	7	8	10	12
Inside Stem, Screwed or Flanged		30.00	45.00	55.00	90.00	125.00
Outside Stem and Yoke, Screwed or Flan Add for By-Pass	iged	55.00	70.00	90.00	135.00	170.00



PLATE C

## FLOOR STANDS.

We furnish these stands as shown and with graduated indicator on side and also without indicator for stationary stem valves.

When ordering give size of valve, if rising or stationary stem, number turns required to open or shut valve, if stem turns to right or left to open.



## MURDOCK HYDRANTS AND STREET WASHERS





PLATE B

#### HYDRANTS.

To Set in GroundFeet	9	9 1/6	3	1 316	1 1	1 5	1 6
Size, ¾ inchEach	9.00	10.00	10.00	11.00	11.00	12.00	13.00
Size, 1 InchEach Size, 1 ¼ and 1 ½ InchEach			12.50	13.50	13.50	14.50	15.50
			-				
To Set in Ground	Fee	et 2	2	1/2	3	3 1/2	4
3/ Inch Solf Closing Hydrant	Enc	b 11 C	0 19	00 1	00	12 00	10.00
34 Inch Self-Closing Hydrant	Eac	h 11.0	$00 \mid 12$	00   1:	2.00	13.00	13

### STREET WASHERS

To Set in GroundFeet	2	2 1/2	3	3 1/2	4	5	6
Size, ¾ Inch Each Size, 1 Inch Each Size, 1 ¼ and 1 ½ Inch Each			10.00	11.09	11 00	19 00	13 00

When ordering give length to set in ground and size, also whether for lead or iron pipe.



### SERVICE AND VALVE BOXES.

NEW PATTERN SERVICE BOXES. 21-2 INCH DIAMETER.



SERVICE BOX.

Size	88	89A	90в	91c	92c
Extension In.	12	12-20	18-26	21-33	24-38
Price	1.10	1.20	1.30	1.40	1.46
Size		92D	93D	93E	94b
Exten'n	.In:	24-42	36-48	36-54	42-57
Price		1.50	1.60	1.66	1.70
Size		. 94E	95E	1001	E 100F
Exten'n	I	n. 42-6	30 48-6	66 54-	72 54-78
Price		1.8	0 2 0	0 2.1	0 2.20

OLD STYLE SERVICE BOXES. 3 INCH DIAMETER.

EXTENSION SECTION.

Size	0	1	1 1/2	2
ExtensionInches	10	13-21	18-28	24-39
Price	1.30	1.60	1.70	1.80
Size	3	4	5	7
ExtensionInches	32-48	34-58	42-66	48-72
Price	2.00	2.10	2.30	2.60

### VALVE BOX.

### VALVE BOXES, 5 1-4 INCH SHAFT.

Size		AA	A	В	C	CC
Extending Inches	17	22-28	28-40	36-48	42-54	48-60
Price	4.80	5.50	5.80	6.10	6.30	6.70
Size	D	DD	E	F	G	Н
Extending Inches	4266	48-72	60-72	60-84	72-84	72-96
Price	7.00	7.40	7.50	7.80	8.20	8.50

### EXTENSION SECTION FOR SERVICE BOXES.

Inches		2 1/2	3				
Size				154	155	156	157
Increasing Length of Box, Inches	$9\frac{1}{2}$	16 1/2		33	20	24	30
Price	.70	.80	1.00	1.10	.90	1.00	1.10



## IRON COCKS, STANDARD



PLATE A SQUARE HEAD



PLATE B



PLATE C THREE-WAY

Size	Inches	$\frac{3}{2}$ $\frac{2}{8}$	1/2	34	1 1	14	$1\frac{1}{2}$	2
Iron Cocks, with Brass Iron Cocks, with Brass Iron Cocks, with Brass Iron 3-Way Cocks with Iron 3-Way Cocks with Iron 3-Way Cocks with Iron 3-Way Cocks with All Iron Cocks, Flange Iron Cocks with Brass Iron Cocks with Brass Iron Cocks with Brass Iron 3-Way Cocks, 3-Way, Iron Cocks, with 3-Way,	l Washer, Screwed Plug, Screwed Plug, Screwed P. and W., Screwed Screwed. Brass Washer, Screwed Brass Plug, Screwed Brass P. and W., Scr'd I. Washer, Flanged Plug, Flanged Plug, Flanged Plug and Washer, Flgd Flanged Brass Washer, Flgd Brass Plug, Flanged Brass Plug,	1.25	1.00	1.20 1 1.60 1 1.75 2 1.65 1 1.80 2 2.20 2 2.35 2 2.35 2 3 3	.55 1 .90 2 2.15 3 .80 2 2.05 2 2.40 3 .65 3 .25 2 .50 3 .00 3 .25 4 .75 4 .00 4	.95 .65 .00 .05 .40 .10 .45 .75 .10 .25 .60	2.35 $3.75$ $4.15$ $2.65$ $3.05$ $4.50$ $4.90$ $3.25$ $3.65$ $5.40$ $5.25$ $5.65$	5 3.25 5.25 5.77 6 3.66 6 4.11 7 00 7 .50 7 .50 7 .50
Size	Inches	214	3	3 1/2	4	1	5	6
All Iron Cocks, Screwed Iron Cocks, with Brass I Iron 3-Way Cocks, with Iron 3-Way Cocks, with Iron 3-Way Cocks, with Iron Cocks, Flanger Iron Cocks, with Brass Iron Cocks Iron Cocks, With Brass Iron Cocks Iron Cocks, With Brass Iron Cocks Iron Iron Iron Iron Iron Iron Iron Iron	Vasher, Screwed	1.40 5.15 3.75 0.50 5.35 5.10 0.75 0.50 0.50 0.25 0.00 0.75	6.75 7.75 13.00 14.00 7.50 8.50 13.75 14.75 9.50 10.50 15.75 16.75 12.75 13.75 19.00	12.00 14.00 27.50 29.50 14.00 30.00 32.00 15.00 17.00 32.00 32.00 22.00 22.00	15.56 19.00 36.50 40.00 19.00 22.56 40.00 43.50 22.56 40.00 43.50 22.56 40.00 43.70 40.70	0 38. 0 67. 0 73. 0 36. 0 42. 0 71. 0 36. 0 42. 0 77. 0 36. 0 42. 0 42. 0 50. 0 43.	00 00 00 50 50 50 1 50 1 00 00 00 1 00 00 00 1	108.00 50.00 58.00 100.00 108.00 60.00 68.00

Always state whether Square or Flat Heads are wanted.

Unless otherwise ordered, we shall supply Brass Plug Cocks, with Brass Washers.

## IRON COCKS. VULCANIZED ASBESTOS PACKED.



PLATE A
SCREW ENDS.

SizeInches	1/8	1/4	3/8	1/2	34	1	1 1/4	1 1/2
Screw Ends	1.30	1.30	1.45	1.60	2.10	2.50	3.50	4.75
SizeInches		21/2		3 1/2	4	5	6	
Screw Ends	7.00	12.00	18.00	27.00	30.00	45.00	60.00	

#### FLANGE ENDS.

SizeInches	1	11/4	1 1/2	2	2 1/2	3	13 1/2	4	5	6	
Flange Ends	2.50	3.50	4.75	7.00	12.00	18.00	27.00	30.00	45.00	60.00	

### EXTRA HEAVY.

Size Inches	$1_2$	3/4	1	134	1 1/2	2	2 1/2	3	3 1/2	4
Screw Ends	2.40	3.00	3.50	5.00	6.75	10.00 10.00	17.00 17.00	${26.00}$	38.00 38.00	${42.00}$

### BRASS COCKS.

### VULCANIZED ASBESTOS PACKED

Size Inches	1/4	3-8	1/2	34	1	1 14	1 1/2	2	21/2	3	3 1/2	4
Screw Ends	3.35	3.35	3.35	4.20	5.60	8.00	10.35	16.00	$\frac{-}{26.50}$	37.50	50.50	64.00
Flange Ends					10.50	12.50	14.50	26.00	38.00	49.00	69.50	90.00

#### EXTRA HEAVY.

Size Inches 1/4	3 8 1/2	34	1	1 1/4	1 1/2	2	21/2	3	3 1/2	4
Screw Ends 3.75 Flange Ends	3.75 3.78	$\frac{-}{4.75}$	6.30	9.00	11.60	18.00	30.00	42.00	66.00	



## GAS SERVICE AND METER COCKS



PLATE A
GAS SERVICE COCK, FLAT HEAD



PLATE B
GAS SERVICE COCK, T HANDLE



PLATE C GAS METER COCK



PLATE D UNION METER COCK

SizeInches	14	3 8	$-1\frac{1}{2}$	34	1	$1.1_{4}$	$1^{-1}\frac{1}{2}$	2	212	3
Gas Service Cocks, Square or Flat HeadEach Gas Service Cocks, T Han-	.75	.85	.95	1.15	1.50	2.25	3.10	5.00	11.00	16.0
dle Each Gas Service Cocks, Male and	.75	.85	.95	1.15	1.50	2.25	3.10	5.00	11.00	16.C
Female Each Gas Service Cocks, with Check			1.30	1.40	1.95	3.00	4.25	6.00		
Gas Meter CocksEach	.90	1.00	$\frac{1.10}{1.20}$	1.35	1.70	$\frac{2.50}{2.00}$	1 25	6 00		
Gas Meter Cocks, with Check Each		1 .								
Gas Union Meter Cocks. Each Gas Service Cocks. Extra			1.40	1.55	$\frac{2.15}{2.20}$	$\frac{3.25}{3.40}$	5.00	7.00		
HeavyEach			1.15	1.50	2.10	3.20	4.10	6.85		

## LOCK GAS SERVICE COCKS



PLATE E

SizeInches	1,2	34	1	11/4	$1^{-1}$ 2	2
Lock Gas Service Cocks. Each Lock Gas Meter Cocks. Each Lock Gas Union Meter Cocks. Each	1.40	1.75	2.30	3 85	5 50	7 75



### STANDARD BRASS STEAM COCKS







PLATE B



PLATE C THREE-WAY



PLATE D

SizeInches	1/4	3.8	$\frac{1}{2}$	34	1	1 1/4	1 1 2
Square or Flat Heads	.85	1.00	1.25	1.70		3.70	4.85
Male and Female, Sq. or Fl. Heads				2.50		5.35	6.7
Both Ends Male, Sq. or Fl. Heads				$\frac{3.25}{1.00}$		6.75	$\frac{8.2}{5.1}$
With Check, Square or Flat Heads						$\frac{3.95}{5.75}$	7.1
Three-WayThree-Way, with Check		2.50	$\frac{2.50}{2.65}$			6.00	7.5
Flanged, Square or Flat Heads					7.30		11.7
SizeInches	2	21/2	3	$3\frac{1}{2}$	4	5	6
Square or Flat Heads	7.30	14.50	22.50	38.50	50.00	125.00	225.0
Male and Female, Sq. or Fl. Heads	9.85	17.50	25.75				
Both Ends Male, Sq. or Fl. Heads	12.00	20.00	29.00				
With Check, Square or Flat Heads							
Flanged, Square or Flat Heads	18.00	27.50	+3.00	62.00	84.00	150.00	275.



PLATE E

### EXTRA HEAVY BRASS STEAM COCKS

SizeInches	1/4	3/8	1 2	34	1	1 1/4	1 1/2
Screwed Flanged	1.30	1.50	2.00 6.50	$\frac{2.85}{7.75}$	4.00 10.00	$\frac{6.75}{14.25}$	$\frac{8.50}{17.25}$
SizeInches	2	2 1/2	3	3 1/2	4	5	6
Screwed Flanged	$\frac{13.50}{27.00}$	$\frac{25.00}{41.00}$	37.00 63.00	54.00 84.00	$75.00 \\ 120.00$	$150.00 \\ 190.00$	$\frac{250.00}{300.00}$

STANDARD ACID (AJAX) METAL COCKS

PLATE !

Size Inches	1/4	3.8	1/2	34	1	11/4	$1\frac{1}{2}$
Sq. or Fl. Head Screwed Flanged	.85	1.00	1.25	1.70 5.50	2.35 7.30	$\frac{3.70}{9.70}$	4.85 11.75
SizeInches	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	5	6
Sq. or Fl. Head Screwed Flanged	7.30 18.00	14.50 27.50	22.50 43.00	$38.50 \\ 62.00$	50.00 84.00	125.00 150.00	$\frac{225.00}{275.00}$



# AIR COCKS



1 8

.40

Size....Inches

Price.....



14

.45

3/8

.50

 $\frac{1}{2}$ 

. 60



PLATE B

No	18	19	20	21
SizeInches	18	14	3 8	1.2
Price	.55	.65	.75	.90



PLATE C

No	26	27	28	33
SizeInches	18	1/4	3/8	1/2
Price, S. T Price, D. T	.70 .80	.80 1.00	.90	1.00 1.35



PLATE D

No	37	38	39
SizeInches	1/8	1/4	3 8
Price	. 65	.70	.85



DI ATE E

No	40	41	42
SizeInches	1/8	1/4	3/8
Price.	.75	.80	.90



## AIR COCKS LEVER HANDLE



PLATE A

18

.55 .60

13

14

3 12

.65

No.....

Size....Inches

Price.....

14	15	

.75



PLATE B

No	22	23	24	25
SizeInches	1/8	1/4	3/8	1/2
Price	.70	.80	. 90	1.05



PLATE C

No	29	30	31	32
SizeInches	18	1/4	3.8	$\frac{1}{2}$
Price, S. T Price, D. T	.85 .95	.95	$\frac{1.05}{1.25}$	1.15 1.50



PLATE D

No	43	44	45
SizeInches	18	1/4	38
Price	.80	.85	1.00



DIATE

No	46	47	48
SizeInches	1.8	1/4	3 %
Price	.90	.95	1.05



### BIBB AIR COCKS



PLATE A
SINGLE THREAD, TEE HANDLE



PLATE B SINGLE THREAD, LEVER HANDLE

SizeInches	18	14	3/8	1/2
Single Thread, T Handle Double Thread, T Handle	.70	.80	.90	1.05
Single Thread, Lever Handle  Double Thread, Lever Handle	.85 .95	.95	1.05	1.15 1.50

### CYLINDER COCKS



PLATE C LEVER HANDLE



PLATE D
LEVER HANDLE, WITH UNION

SizeInches	14	3.8	1/2	34
Cylinder Cock	1.00 1.75	$\frac{1.15}{2.00}$	$\frac{1.65}{2.50}$	$\frac{2.40}{3.75}$

### BIBB CYLINDER COCKS

SizeInches	1/4	3/8	1/2	34
Single Thread		$\frac{1.30}{1.50}$	$\frac{1.85}{2.10}$	$\frac{2.60}{2.70}$



### COMPRESSION GAUGE COCKS.



WOOD WHEEL.



PLATE B
WOOD WHEEL, WITH STUFFING BOX

SizeInches	18	1/4	3/8	1/2	3/4
Wood wheel Gauge Cock, no Stuffing Box, Standard			1.35 $1.50$ $1.20$	1.50 $1.50$ $2.00$ $1.30$	1.25 $1.70$ $2.25$ $1.45$

### STEAM GAUGE COCKS.

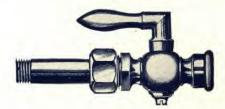


PLATE C LEVER HANDLE, WITH UNION.

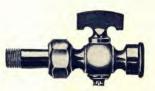


PLATE D
TEE HANDLE, FEMALE.

SizeInches	1/4
Male and FemaleFemale	.95
Tee Handle and with Union	1.75
Lever Handle and with Union	1.90

## WATER GAUGES, STEAM METAL.



PLATE A
FOR EXPANSION TANK.



PLATE B
ROUGH BODY, IRON WHEEL.



PLATE C FINISHED BODY, IRON WHEEL



PLATE D
FINISHED BODY, WOOD
WHEEL.



PLATE E
ROUND BODY FINISHED.
FOUR GUARDS.



PLATE F SQUARE BODY FINISHED. FOUR GUARDS.

The second secon	
Plate B No. 2, Rough Round Body, I. W., 38x12 in. Glass, 34 in. I. P. Plate B No. 3, Rough Round Body, I. W., 3xx12 in. Glass, 34 in. I. P. Plate C No. 1, Finished Round Body, I. W., 3xx16 in. Glass, 34 in. I. P. Plate C No. 2, Finished Round Body, I. W., 4xx16 in. Glass, 34 in. I. P. Plate C No. 3, Finished Round Body, I. W., 5xx12 in. Glass, 35 in. I. P. Plate D No. 1, Finished Round Body, W. W., 5xx12 in. Glass, 34 in. I. P. Plate D No. 2, Finished Round Body, W. W., 5xx12 in. Glass, 35 in. I. P. Plate D No. 3, Finished Round Body, W. W., 5xx12 in. Glass, 12 in. I. P. Plate E No. 1, Finished Round Body, W. W., 5xx12 in. Glass, 14 in. I. P. Plate E No. 2, Finished Round Body, W. W., 5xx12 in. Glass, 14 in. I. P. Plate F No. 2, Finished Round Body, W. W., 5xx12 in. Glass, 14 in. I. P. Plate F No. 1, Finished Round Body, W. W., 5xx12 in. Glass, 34 in. I. P. Plate F No. 1, Finished Round Body, W. W., 5xx12 in. Glass, 34 in. I. P. Plate F No. 1, Finished Round Body, W. W., 5xx12 in. Glass, 34 in. I. P. Plate F No. 2, Finished Round Body, W. W., 5xx12 in. Glass, 32 in. I. P. Plate F No. 2, Finished Round Body, W. W., 5xx12 in. Glass, 32 in. I. P.	2.60 2.75 3.00 4.50 3.25 5.00 5.25 5.25 6.25 6.20 0.00



### SCOTCH GAUGE GLASSES



External DiameterInches	1/2	5 8	34	7/8	1
Length, 10 inches	3.00	3.00	3.60	5.04	6.12
Length, 11 inches	3.24	3.24	3.96	5.64	6.72
length, 12 inches	3.60	3.60	4.32	6.12	7.32
Length, 13 inches	3.84	3.84	4.80	6.60	7.92
Length, 14 inches	4,20	4.20	5.16	7.08	8.52
ength, 15 inches	4.44	4.44	5.52	7.56	9.12
ength, 16 inches	4.80	4.80	5.88	8.16	9.72
ength, 17 inches	5.04	5.04	6.24	8.64	10.32
Length, 18 inches	5.40	5.40	6.60	9.12	10.92
Length, 19 inches	5.64	5.64	7.08	9.60	11.52
Length, 20 inches	6.00	6.00	7.44	10.20	12.12
length, 22 inches	6.60	6.60	8.16	11.16	13.44
Length, 24 inches	7.20	7.20	8.88	12.12	14.64
Length, 30 inches	9.00	9.00	11.16	15.24	18.24
Length, 36 inches	10.80	10.80	13.44	18.24	21.96
ength, 48 inches	14.52	14.52	18.00	24.36	29.16
ength, 60 inches	18.12	18.12	22.56	30.48	36.48
ength, 72 inches	21.84	21.84	27.12	36.48	43.80

Lengths over 24 inches and all 1-inch glasses, special discount.





PLATE B

PLATE C

Chesterton Gauge Glass Cutter, Each, 2.00 | Gauge Glass Cutter......Each, 1.00



Simplex Gauge Glass Cutter.... Each, .50

RUBBER GAUGE GLASS GASKETS







PLATE F

PLATE E

Sizes: ½, 58, 34..... Per Dozen, .60 Packed 1 dozen in each box Per Doz., .60



## PLAIN CYLINDER LUBRICATORS.



PLATE A
WITH DRAIN STEM.

### STEAM CHEST OILERS. WITHOUT DRAIN STEM

No	80	81	82	83	84
Diameter Inches	1	1 1/4	1 1 2	1 34	2
Pipe Thread	3.8	3.4	3 8	1/2	1/2
Without Tube or DrainEach	2.00	2.20	2.40	2.60	2.90
Ne	85	86	87	88	
Diameter Inches	21/4	$2^{\frac{1}{2}}$	3	3 12	
Pipe Thread	1/2	1/2	34	34	
Without Tube or DrainEach	3.25	3.75	4.75	7.00	

### WITH DRAIN STEM

No	90	91	92	93	94
Diameter Inches	1	114	112	1 34	2
Pipe Thread	3 <sub>8</sub>	3 8	3 8	1.6	1.2
With Tube and DrainEach	3.00	3.20	3.40	3.60	3.90
No.	95	96	97	98	
Diameter Inches	2 14	2 1/2	3	314	
Pipe Thread	12	1/2	34	34	
With Tube and Drain Each	4.25	4.75	5.75	8.00	



## POWELL SIGHT UP-FEED LUBRICATORS.

SINGLE CONNECTION DOUBLE CONNECTION



CRESCENT SIGHT UP-FEED LUBRICATOR TROJAN SIGHT UP-FEED LUBRICATOR



### POWELL CRESCENT SIGHT UP-FEED LUBRICATORS.

Capacity	¼ pt.	1/3 pt.	½ pt.	3 <sub>4</sub> pt.	1 pt.	1 ½ pt.	1 qt.
Attach Shank, Pipe Thread . In.	3/8	3/8	1/2	1/2	1/2	1/2	1/2
GlassIn.	34x2 1/4	34x2 14	34X2 1/4	34x21/4	34x31/4	34x3 1/4	34x3 1/4
Semi-finished Each Semi-finished and Plated Each Polished all over Each Polished all over & Plated . Each	$\frac{5.00}{5.25}$	5.75	5.50 $6.25$ $6.25$ $7.00$		7.75 8.50 8.50 9.25	$11.00 \\ 10.75$	$11.75 \\ 12.00$

### POWELL TROJAN SIGHT UP-FEED LUBRICATORS.

Capacity	1/3 pt.	½ pt.	34 pt.	1 pt.	1 1/2 pt.	1 qt.	½ gal.	1 gal.
Size of ShankIn.	3/8	1/2	1/2	1/2	1/2	1/2	3/4	3/4
Index GlassIn.	12x2 34	58x3 34	5/8×4 1/4	5/8×4 1/2	5/8x4 1/2	5 8x 5	5/8×6 1/4	3/4×9
Sight-Feed GlassIn.	58X2 1/4	34x2 1/4	34x3 1/4	34x3 1/4	34x3 1/4	3/4x3 1/4	34x3 1/4	34x5½
Polished Each Nickel Plated Each	6.00	$\frac{6.50}{7.25}$	7.75 8.50	$9.00 \\ 9.75$	11.00 12.00	$\frac{12.00}{13.25}$	17.00 18.50	$21.25 \\ 23.25$



## PLAIN BRASS OIL CUPS



PLATE A



PLATE I

	00	0	1	2	3	4	5	6	7	8	9	10	11
Outside DiameterInches Shank Pipe Thread	5/8 1/8	34	7/8 1/8	1 1/4	1 1 8	1 1/4	1 1/2	1 3 1 8	2 1/2	$\frac{2\frac{1}{4}}{\frac{1}{2}}$	$\frac{2\frac{1}{2}}{\frac{1}{2}}$	$\frac{2\frac{3}{4}}{\frac{3}{4}}$	3
Plain Fin'd Brass Each Locomotive Patt'n, Fin-	.25												
ished BrassEach	.30												
Tubes	.10	. 10	.10	.10	.15	.15	.15	.15	.15	.20	.20	. 25	. 25

## BRASS OIL CUPS



PLATE C



PLATE

No	0	1	2	3	4	5	6	6 1/2	7	8	9	10	11
Outside Diam Inches Shank Pipe Thread	3.4 1.8	7/8 1/8	1 1/4	1 1/8	1 1/4	$\frac{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{$	1 34 38	1 7/8	2 1/2	2 1/4 1/2	2 1/2 1/2	2 3/4	3 3/4
Fin. Br. with Lever Handle Cock. Each Fin. Br. with Hinged	.90	1.00	1.10	1.35	1.60	2.20	2.75	3.00	3.25	4.00	5.00		
Lid Each Add to List for Brass Tubes.		.70	.85			1.60	2.10		2.70	20			



## POWELL PLAIN STEAM WHISTLES.



PLATE A



PLATE B
ADJUSTABLE LEVER VALVE

Diameter of Bell. In. Pipe Connection In.	1 1/4	114	1 1/2	2 ½	21/2	3 34	3 1/2	4 1 ½	5 1 ½	6 1 ½	8 2
Plate A Plate B Iron Base, no Valve.	3.10	3.75	4.00	5.50	6.50	8.50	11.50	15.00	22.50	33.00	95.00

### POWELL SINGLE BELL CHIME WHISTLES.



PLATE C



PLATE D
ALL BRASS, WITH ADJUSTABLE VALVE

Diameter of BellIn. Pipe ConnectionIn.	1 ½ 3/8	2 ½	2 1/2 3/4	3 34	3 1/2	1 1/4	5 1 ½	6 1 ½	8 2
Plate C Plate D Locomotive Style	6.00	7.00	9.00	11.00	15.00	18.00	28.00	42.00	100.00

### PLAIN WHISTLE VALVES

Pipe ConnectionIn.	1/4	3/8	1/2	34	1	1 1/4	1 1/2	2
Plate G Each	2.00	2.00	2.50	3.00	3.50	5.00	6.00	9.00



### POP SAFETY VALVES



	Plain	Perf. Caps
1/2 inch, for Boilers below 3 H.P.	8.00	9.75
37 inch, for Boilers from 3 to 5 H.P	10.00	12.00
1 inch, for Boilers from 5 to 10 H.P.	$12.00 \\ 15.00$	17.50
1 % inch, for Boilers from 20 to 30 H.P	20.00	22.75
2 inch, for Boilers from 30 to 40 H.P.	30.00	33.00

In ordering, state pressure to be carried.

### FOR STATIONARY AND MARINE BOILERS



SCREWED BASE



PLATE C FLANGED BASE

Size.	Style of Base	Diameter of Side Outlet,		Capacity, Horse	Reg	ular	Nickel	-Seated
Ins.	Style of Dasc		Valves Ins.		Plain	Lock- up	Plain	Lock- up
3 3 ½ 4 4 ½ 5 ½	Screwed Sc. or 9 in. Flge. Sc. or 9 in. Flge. Sc. or 10 in. Flge. Sc. or 11 in. Flge. Sc. or 11 in. Flge. Sc. or 12 in. Flge. Sc. or 12 in. Flge. Sc. or 14 in. Flge.	3 ins. 3½ ins. 4 ins. 9½ in. Flge. 9 in. Flge. 10 in. Flge.	12 14 13 14 16 ½ 18 ½ 22 ½ 25 ½ 25 ½ 27	25 to 40 40 to 75 75 to 100 100 to 125 125 to 150 150 to 175 175 to 200 200 and upwards	$\begin{array}{c} 65.00 \\ 80.00 \\ 100.00 \\ 125.00 \\ 160.00 \\ 220.00 \end{array}$	$\begin{array}{c} 55.00 \\ 75.00 \\ 90.00 \\ 110.00 \\ 135.00 \\ 170.00 \\ 235.00 \end{array}$	$\begin{array}{c} 60.00 \\ 77.00 \\ 94.00 \\ 116.00 \\ 145.00 \\ 185.00 \\ 260.00 \end{array}$	65.00 87.00 104.00 126.00 155.00 195.00 285.00

In ordering state pressure to be carried. If flange is desired, state diameter.

## POWELL AUTOMATIC INJECTOR.



PLATE A

		Pipe		per Hour 80 to 95 lbs.	HORSI	E POWER
Size No.	Price	Connec- tions	Steam P Galle	ressure	Based on Ordinary Tubular	Based on 30 Lbs. Water per. H. P.
		Inches	Maxsmum	Minimum	Boilers	per Hour
2	16.00	3/8 1/2 1/2 1/2 3/4 3/4	80	55	4 to 8	6 to 12
2.12	18.00	1/2	140	70	8 to 16	10 to 20
3	20.00	1/2	180	100	12 to 22	15 to 30
3 1/2	25.00	34	260	135	17 to 32	22 to 45
4	30.00	3/4	360	170	20 to 45	25 to 60
$\frac{4}{5}^{1/2}$	40.00	1	480	295	40 to 65	45 to 80
5	45.00	1	600	325	45 to 80	50 to 100
$\frac{6}{7}$	55.00	1 1/4	800	425	50 to 100	60 to 135
7	60.00	1 14	1,000	520	75 to 135	85 to 165
8	75.00	1 1/2	1,400	775	100 to 180	125 to 235
9	90.00	$1.1\frac{1}{2}$	1,900	875	115 to 255	150 to 320
10	110.00	2	2,400	1,300	160 to 320	200 to 400
11	125.00	$\frac{1}{2}$	3,000	1,600	200 to 400	250 to 500



## METROPOLITAN AUTOMATIC INJECTORS.



PLATE A

Sizes	Prices, Model N	Size of all Pipe Connec- tions	Size Overflow or Waste Pipe		Horse Power for the Ordinary Type of Boiler and Engine	
2 3	15.00	3/8	3 4	60 gals.	4 to 6	5 to 8
	16.00	3/8	3 4	80 gals.	6 to 8	8 to 12
3 ½ 4 5	$18.00 \\ 20.00 \\ 25.00$	3/8 3/8 1/2 1/2 1/2/3/4 3/4	34 34 1	120 gals. 165 gals. 250 gals.	8 to 15 15 to 20 20 to 30	12 to 20 20 to 28 28 to 40
6	30.00	1 1	1	350 gals.	30 to 45	40 to 55
7	40.00		1 1/4	500 gals.	45 to 65	55 to 80
8	45.00		1 1/4	600 gals.	65 to 80	80 to 110
9 10 11	55.00 60.00 75.00	1 ½ 1 ½ 1 ½ 1 ½	$\frac{1}{1}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$	800 gals. 1000 gals. 1300 gals.	80 to 100 100 to 130 130 to 170	110 to 145 145 to 180 180 to 235
12	90.00	$\frac{1}{2}\frac{12}{2}$	2	1750 gals.	170 to 230	235 to 300
13	110.00		2 1/2	2300 gals.	230 to 300	390 to 400
14	125.00		2 1/2	2850 gals.	300 to 375	400 to 500



PLATE B

				PLAIL B		
Sizes	Prices. Model G	Size of all Pipe Connec- tions	Size Overflow or Waste Pipe	Capacity with 80 lbs. Steam Pres- sure 2-ft. Lift	Horse Power for the Ordinary Type of Boiler and Engine	
2 1/2 4 1/2 5 1/2 6 1/2 7 1/2 8 9 1/2 10 1/2 11 1/2 12 1/2 13 1/2 15 1/2	18.00 20.00 25.00 30.00 40.00 55.00 60.00 75.00 90.00 110.00 125.00	1 1 14 14 14 14 14 14 14 14 14 14 14 14	344 344 344 344 344 1 1 1 1/4 1 1/4 1 1/2 1 1/2	120 gals. 165 gals. 250 gals. 350 gals. 500 gals. 600 gals. 1000 gals. 1300 gals. 1750 gals. 2300 gals. 2300 gals.	8 to 15 15 to 20 20 to 30 30 to 45 45 to 65 65 to 80 80 to 100 100 to 180 130 to 170 170 to 230 230 to 300 300 to 375 375 to 500	12 to 20 20 to 28 28 to 40 40 to 55 55 to 80 80 to 110 110 to 145 145 to 180 180 to 235 235 to 300 300 to 400 400 to 550 500 to 650
$16\frac{1}{2}$ $17\frac{1}{2}$ $18\frac{1}{2}$	200.00 250.00 300.00	$\frac{21/2}{3}$	2 2 2 1/2 2 1/2	4200 gals. 4700 gals. 5500 gals.	500 to 650 650 to 775 775 to 950	650 to 800 800 to 950 950 to 1200

# Co. Dainear. &. Co.



### THE HANCOCK EJECTORS.

THIS LIST ADOPTED MAY 1ST, 1900

		PIPE CONNECTIONS					
Size	Price Steam		Suction and Delivery	per Hour with 60 Lbs. Steam Pressure			
No. 1, Brass. No. 2, Brass. No. 3, Brass. No. 4, Brass. No. 5, Iron. No. 6, Iron. No. 7, Iron. No. 8, Iron. No. 9, Iron. No. 10, Iron. No. 11, Iron.	8.00 10.00 15.00 20.00 25.00 35.00 45.00 70.00 110.00	1/4 inch §§ inch 1/2 inch 1/4 inch 3/4 inch 1 inch 1 1/4 inch 1 1/2 inch 2 inch 2 1/2 inch 2 1/2 inch	1/2 inch 3/4 inch 1 inch 1 1/4 inch 1 1/2 inch 2 inch 2 1/2 inch 3 inch 4 inch 5 inch 6 inch	244 gals. 550 gals. 977 gals. 1,525 gals. 2,200 gals. 3,900 gals. 6,000 gals. 15,600 gals. 24,300 gals.			

Sizes 1, 2, 3 and 4 are made entirely of brass. Sizes 5, 6 and 7 have iron bodies and brass unions for steam and suction connections. Sizes 8, 9, 10 and 11 have iron bodies with brass unions for steam connection only. Sizes 5, 6, 7, 8, 9, 10 and 11 made entirely of brass. Larger sizes and Ejectors for handling corrosive liquids furnished on special order.

Special—All Iron Ejectors made to order.



#### THE H-D EJECTORS.

MODEL C.

PRICE LIST THIS LIST ADOPTED JUNE 1ST, 1898 PLATE B

		PIPE CO:	Capacity per Hour	
Size	Price Model C	Steam	Suction and Delivery	with 50 Lbs. Steam Pressure
No. 1, Brass	8.00	3% inch	½ inch	250 gals.
No. 2, Brass		1% inch	¾ inch	500 gals.
No 3, Brass	$\frac{15.00}{20.00}$	34 inch	1 inch	960 gals.
No 4, Brass		1 inch	1 ¼ inch	1,300 gals.
No. 5, Brass.	$25.00 \\ 35.00 \\ 45.00$	1 ¼ inch	1 ½ inch	2,000 gals.
No. 6, Iron.		1 ¼ inch	2 inch	4,000 gals.
No. 7, Iron.		1 ½ inch	2 ½ inch	8,000 gals.
No. 8, Iron	55.00 $70.00$	2 inch	3 inch	11,000 gals.
No. 9, Iron		2 inch	4 inch	15,000 gals.

Size No. 6 has iron body, balance brass. Sizes Nos. 7 and 8 have iron bodies and delivery connections, balance brass. Sizes No. 9 has brass tubes, balance iron. Size No. 10 has iron body, brass tubes, all connections flanged. Sizes Nos. 6,7, 8, 9 and 10 made entirely of brass to order.

SPECIAL—All Iron Ejectors made to order.



## SINGLE SPRING BOURDON PRESSURE CAUGES.

WITH IMPROVED INDEPENDENT MOVEMENT.





All Gauges of 2 and 21/2-inch dial have 1/8-inch male pipe thread connection; 3 to 5 inch dial inclusive, 14-inch male pipe thread connection; 51/2 to 24-inch dial inclusive, 1/4-inch female pipe thread connection. If purchasers desire other size connection, kindly mention when ordering.

A siphon should always be used with this gauge, when indicating steam pressure. For Pressures not Exceeding 1,000 lbs. per Square Inch.

### SPRINGS OF SOLID DRAWN TUBE. PRICE, INCLUDING COCK.

Size Dial inches Ring	e, Iron Case, N.P.or Sil. Met. Ring	Brass	N. P. or Silver Met. Case	Deep Case	N.P.or Silver Metal Deep Case	Alumi- num Case
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	206.00 140.00 113.00 92.00 51.50 33.00 22.75 16.60 13.50 10.25 8.20 7.18 6.15	260.00 190.00 155.00 125.00 100.00 75.00 40.00 30.00 20.00 16.00 12.00 11.00 10.00 9.00 8.00	280.00 205.00 167.50 135.00 107.50 79.00 43.00 22.00 17.50 22.00 13.25 12.00 11.00 9.75 8.60 8.60	80.00 44.00 33.50 23.00 18.50 13.75 12.50 10.25 9.25	84.00 47.00 36.00 25.00 20.00 13.50 12.50 11.00 9.75	260 00 190 00 155 00 125 00 100 00 75 00 40 00 30 00 20 00 11 00 12 00 11 00 9 00 8 00 8 00

Gauges smaller than 2 inch size sold at 2 inch list and discount. Iron case gauges with spun brass jacket sold at brass case list and discount.



#### ALTITUDE GAUGES.

SPRINGS OF SOLID DRAWN OR BRAZED TUBE.

PLATE A

#### PRICES, INCLUDING COCKS.

			HOLOBII		•	
Size Dial inches	Iron Case, Japanned			N. P. Case		N. P. Deep Case, O. G. or Oct. Ring
12 10	60.00 40.00	61.50	80.00 50.00	84.00 53.00	85.00 54.00	89.00 57.00
$\frac{81/2}{634}$	$\frac{30.00}{20.00}$	$\frac{30.75}{20.60}$	40.00 25.00	$\frac{42.50}{27.00}$	$\frac{43.50}{28.00}$	$\frac{46.00}{30.00}$
$\frac{6}{5}\frac{1}{2}$	$16.00 \\ 14.00 \\ 12.00$	16.50 $14.25$ $12.20$	20.00 16.00 14.00	$ \begin{array}{r} 21.50 \\ 17.25 \\ 15.00 \end{array} $	23.00 18.50 16.00	24.50 19.75 17.00
$\frac{4}{4}\frac{1}{2}$	$\frac{12.00}{12.00}$	$12.20 \\ 12.20$	14.00 14.00	15.00 15.00	16.00 16.00	17.00 17.00
3 1 2	10.00	10.18	12.00	12.75	13.75	14.50

#### AMMONIA GAUGES.

WITH STEEL TUBE SPRING.

The White Enameled Dials used with these Gauges have large figures, and the lettering s done in the most artistic manner.

These Gauges are made for any required pressure.

#### PRICES, NOT INCLUDING COCKS.



PLATE P

Size	Iron Case and Ring	Iron Case, N. P. Ring
8 or 8 ½ inch Dial, Pressure and Vacuum or Pressure only. 6 ¾ inch Dial, Pressure and Vacuum or Pressure only. 6 ¼ inch Dial, Pressure and Vacuum or Pressure only. 5 ½ inch Dial, Pressure and Vacuum or Pressure only. 4 ½ inch Dial, Pressure and Vacuum or Pressure only. 3 ½ inch Dial, Pressure and Vacuum or Pressure only. 3 ½ inch Dial, Pressure and Vacuum or Pressure only.	45.00 40.00 35.00 30.00 *30.00 25.00 25.00	45.75 40.60 35.50 30.50 30.50 25.50 25.50



# JENKINS DISC RADIATOR VALVES. UNION RADIATOR VALVES.



# W!TH WOOD WHEEL. AND IMPROVED GROUND MALE UNION

SizeInches	1/2	34	1
Rough Body, Finished Trimmings. Finished All Over. Rough Body, Plated Trimmings. Rough Body, Plated All Over. Finished and Plated All Over.	$3.20 \\ 3.05 \\ 3.15$	$\frac{3.75}{3.80}$	$4.80 \\ 4.65 \\ 4.75$
SizeInches	1 1/4	1 1/2	2
Rough Body, Finished Trimmings. Finished All Over. Rough Body, Plated Trimmings. Rough Body, Plated All O er. Finished and Plated All Over.	$6.40 \\ 6.25 \\ 6.40$	8.75 8.00 8.10	13.85 $12.85$ $13.10$

PLATE A

These valves are made with male unions only. Threads right hand on Union, right hand on bottom.

# FEMALE RADIATOR VALVES.

SizeInches	1/2	34	1
Rough Body, Finished Trinnmings. Finished All Over. Rough Body, Plated Trimmings. Rough Body, Plated All Over. Finished and Plated All Over.	2.40		3.65
SizeInches	1 1/4	1 1/2	2
Rough Body, Finished Trimmings. Finished All Over Rough Body, Plated Trimmings. Rough Body, Plated All Over Finished and Plated All Over.	$5.25 \\ 4.75 \\ 4.90$	6.25 7.25 6.50 6.75 7.75	$11.73 \\ 10.73 \\ 11.00$



PLATE

These Valves are tapped right hand on bottom, left hand on side, unless otherwise ordered,

Lock Shield same price as Wood Wheel Valve; Keys extra.



## JENKINS DISC RADIATOR VALVES.



# UNION CORNER RADIATOR VALVES. WITH WOOD WHEEL AND IMPROVED GROUND MALE UNION.

Size Inches	34	1	1 14
Rough Body, Finshed Trimmings. Finished All Over Rough Body, Plated Trimmings Rough Body, Plated All Over Finished and Plated All Over	3.85 4.50 4.15 4.20	4.75 $5.50$ $5.15$ $5.25$ $6.00$	$\begin{array}{c} 6.45 \\ 7.20 \\ 6.90 \\ 7.05 \end{array}$
Size, Inches	$1\frac{1}{2}$	2	
Rough Body, Finished Trimmings. Finished All Over. Rough Body, Plated Trimmings Rough Body, Plated All Over Finished and Plated All Over	$9.55 \\ 8.80 \\ 8.95$	13.85 15.35 14.15 14.45 15.95	

#### PLATE A

# FEMALE CORNER RADIATOR VALVES. WITH WOOD WHEEL.

SizeInches	34	1	134	1.12	2
Rough Body, Finished Trimmings. Finished All Over. Rough Body, Plated Trimmings. Rough Body, Plated All Over. Finished and Plated All Over.	2.75 3.40 3.00 3.15 3.80	$   \begin{array}{r}     3.50 \\     4.25 \\     3.85 \\     4.00 \\     4.75   \end{array} $	5.00 5.75 5.25 5.50 6.25	7.00 8.00 7.25 7.50 8.50	11.55 $13.05$ $11.85$ $12.10$ $13.60$

## CORNER RADIATOR VALVES, REGULAR PATTERN

#### WITH MALE OR FEMALE UNIONS, RIGHT OR LEFT HAND OUTLET.

SizeInches	1/2	34	2
Rough Body, Finished Trimmings.	3.05	3.85	$\begin{array}{c} 4.75 \\ 5.50 \\ 5.15 \\ 5.25 \\ 6.00 \end{array}$
Finished All Over	3.50	4.50	
Rough Body, Plated Trimmings	3.35	4.15	
Rough Body, Plated All Over	3.45	4.20	
Finished and Plated All Over	3.90	4.85	
SizeInches	1 1/4	1 12	-
Rough Body, Finished Trimmings.	6.45	$9.55 \\ 8.80 \\ 8.95$	13.85
Finished All Over.	7.20		15.35
Rough Body, Plated Trimmings.	6.90		14.15
Rough Body. Plated All Over.	7.05		14.45
Finished and Plated All Over.	7.80		15.95



PLATE F

Please state whether Right or Left Hand Valves are required. On Valves without Union, state whether both threads on right hand or inlet right hand and outlet left hand.



# QUICK-OPENING HOT WATER RADIATOR VALVES



Size..... Inches Wood Wheel

1 14 1 1/2 Rough Body, Fin. Trim... 2.45 3.25 4.50 6.50 10.00 Rough Body, Plated all 

UNION RADIATOR VALVES WITH IMPROVED GROUND UNION

These Valves are made with male unions only, threads right hand on Union, right hand on bottom. Lock Shield same price as Wood Valve. Keys extra.

PLATE A

#### FEMALE RADIATOR VALVES

SizeInches	34	1	11/4	13/2	2
Rough Body, Finished Trimmings Rough Body, Plated all over Finished Body Finished Body, Plated all over	$\frac{1.95}{2.15}$	$\frac{2.65}{2.85}$	3.70	$\frac{5.00}{5.50}$	7.75

These Valves are tapped right hand on bottom, left hand on side unless otherwise ordered.

Lock Shield same price as Wood Wheel Valve; Keys extra,



PLATE B

### UNION ELBOWS FOR HOT WATER HEATING



SizeInches	12	34	1	11/4	1.12	2
Rough Body, Plain Rough Body, Plated all						
Finished all over Fin, and Plated all over.	$\frac{1.75}{2.00}$					

PLATE &



# WOOD AND BRASS WHEELS FOR VALVES





PLATE A. WOOD

BRASS

PERIL A. HOOD						
Size of ValvesInches	$\frac{1}{2}$	34	1	1 1/4	1 1/2	2
Wood Wheels . Each Top and Bottom Plates, Brass . Each Top and Bottom Plates, Nickel Plated . Each Finished Brass Wheels . Each Finished Brass Wheels, Nickel Plated . Each	.35	1.30	1.30	1.60	1.65	$\frac{.50}{1.75}$

## RADIATOR VALVES







PLATE D UNIQUE WATER RADIATOR

# GATE RADIATOR VALVES, WITH UNION

Diameter of Opening	Inches	1/2	34	1	1 1/4	$1\frac{1}{2}$	2
		00	0 60	9 75	5 50	6 50	110 50
Finished Trimmings. Nickel Plated all over. Finished Trimmings, with Male or Female U		$\begin{bmatrix} 2.00 \\ 2.20 \end{bmatrix}$	$\frac{2.60}{2.85}$	4.00	5.20	7.10	11.25
Finished Trimmings, with Male or Female U Nickel Plated all over, with Male or Female U	inion	3.10	3.75	4.65	6.10	17.85	12.10

# UNIQUE WATER RADIATOR VALVES

SizeInches	1/2	3/4	1	1 1/4
Center of Body to End of Spud. Inches Inside Dimensions of Couplings to Radiators Inches From Center top opening of Elbows to bottom of Flbows. Inches Between Centers of bottom Elbow connections. Inches Stud Diameters. Inches	$2\frac{7}{8}$ $1\frac{1}{4}$ $1\frac{7}{8}$ $5\frac{1}{4}$ $1\frac{1}{4}$	2 78 1 1/4 1 7/8 5 3/4 1 1/4	3 1½ 2 7 1½ -	$\begin{array}{c} 3_{16}^{5} \\ 1_{16}^{15} \\ 2_{1/2}^{1/2} \\ 7_{3/8}^{3/8} \\ 2 \\ \hline \end{array}$
Price	4.25	5.40	5.80	7.95



# MODEL FLOOR AND CEILING PLATES.



PLATE A



PLATE B

1									1	1
Size Inches	1/2	3/4	1	11/4	1 ½	2	21/2	3	3 1/2	4
Black	1.4	. 14		. 20	.24	.28	.43	. 60	.90	$\frac{-}{1.25}$ $\frac{1.25}{1.50}$

# STAMPED STEEL FLOOR AND CEILING PLATES.

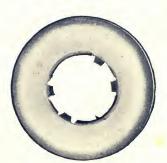


PLATE C

SizeInches	1/2	34	1	11/4	11/2	2
Plain Steel Each	.07	.07	.07	.08	.08	.10
N. P. Steel Each	.10	.10	.10	.11	.11	.14
Polished and N. P. Steel . Each	.16	.16	.16	.22	.22	.30

# CJ. Rainear. 2. Co.

#### PERFECT AUTOMATIC AIR VALVE.



#### BALL JOINT ROYAL FLOAT AUTOMATIC AIR VALVE.



No.	1.													. 80
No.														. 60

**IMPROVED** COMPRESSION KEY AIR VALVE.



PLATE C



rent in	MAT .			
		7		
100	-		1	
4	161			
			1	
	YYY.	7		

COMPRESSION
WOOD WHEEL AIR
VALVE.



NICKEL PLATED.

Threaded	for	I	r	o	n	I	'n	p	e	,	SizeIn.	18
Plain											. Each,	.65
Nickeled.											. Each,	.70

Threaded	for I	on Pipe,	SizeIn.	1/8
Price			Each,	.70



#### O. S. DISTRIBUTORS.





PLATE A

#### POSITIONS OF TAPPINGS ARE INDICATED BY FIGURES 1, 2, 3.

Insure free, positive, uniform circulation. Save labor, fittings and joints, cutting of floors, beams, etc. Prevent friction; no leaks; keep risers in line.

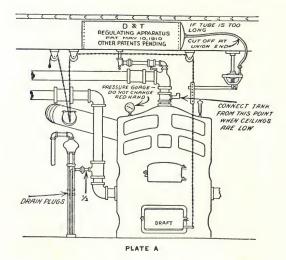
#### PRICE LIST AND DIMENSIONS

NT -	Тарр	ings	, In	ches		Dimensio	ns, Inches		List Price
No.	1	2	2	3	A	В	C	D	Each
610	1	x	34 X	34	358 334 334	2	2 3 (	1 3 %	. 60
611	1	X	4 X	1	3 3 4	$\overline{2}$	2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	$1^{+2}_{-2}$	
612	1	x l	X	3.4	3 3 4	2	2 3 4	1 3 8	. 60 . 60 . 80 . 80 . 80 . 90 . 90 . 90 . 90 . 90 . 1 . 20
613	1	x 1	V 1	1	4	2 1/4	3	$\frac{1}{1}\frac{3}{1}\frac{8}{2}$	. 60
614	1 1/4	x 1	$\times$ 1	1	438	2 3 3	3.5 4	2	.80
615	1 1/4	x 1	x 1	134	4 1/2	2 1/2	3 3 4	2	.80
616	1 1/4	x 1 1	X 1 X 1 4 X 1	l	4 3 8	23%	$\frac{31\frac{1}{2}}{378}$	2	.80
617	1 1/4	x 1 1	4 X 1	14	5	2 3 4	3 78	2	.80
618	1 1/6	v 1 1	4 x 1		416	2 3 8	3 3 4	1.76	. 90
619	1 1/2	x 1	x 1	14	$\frac{4}{4}\frac{1}{3}\frac{1}{4}$	25%	4	1 1/2 22 22 21 7/8 21 1/4 22 1/4 22 1/4	. 90
620	1 1/2	x 1 !	4 X 1	14	458	23%	4	214	.90
621	1 1/2	$\times 1$	4 X 1 2 X 1 2 X 1 4 X 1	1/2	431	21/2	$\frac{378}{334}$	2	.90
622	1 1/2	x 1 !	2 x 1	1/4	434	21/2	3 3 4	1 7/8	. 90
623	1 1/2	x 1 1	2 X 1	1/2	514	$2\frac{3}{4}$	4 14	2 1/4	. 90
624	2	x 1 !	4 X 1	1.5	4 3 4	213	4 14	2 1/4	1.20
625	2	X I	2 X	1/4	$\frac{4}{5}^{34}$	218	433	2 1/4	1.20
626	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	x 1!	2 x 1	1/2	5	218	412	2 14	1.20
627	2	x 2	x 1	1/4	4 7/8	2 16	$4.1\frac{7}{2}$	2 1/4	1.20
628	2	x 2 x 2	$\times$ 1	1/2	5 1/4	218	4 15 4 15 4 15 4 34	2 1/4	1.20
629	2	x 2	x 2	2	558	27%	4 3 4	238	1.20
630	2 1/2	x 1 !	2 x 1	1/2	5 1/4	2.78	4.7%	212	2.00
631	2 1/2 2 1/2 2 1/2 2 1/2	x 2	x 1	1/2	5 1/4 5 5 1/4 5 5 1/4 5 5 7/8	19101 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 3 8	21212121212121212121212121212121212121	2.00
632	2 1/2	x 2	X 2	2	5 78	3 14	514	258	2.00



# THE D. & T. COMBINATION REGULATOR AND CIRCULATOR.

SOMETHING ENTIRELY DIFFERENT FROM ALL OTHERS



ADVANTAGES OF THE D. & T. SYSTEM

No unsightly expansion tank with the D. & T. System, in the finished part of the building,

No possibility of the overflow pipe becoming clogged with the D. & T. System. No possibility of the overflow pipe becoming frozen with the D. & T. System. No sluggish circulation with the D. & T. System.

The D. & T. System is the only complete device on the market that increases the circulation and controls the dampers automatically, without depending on separate regulating or circulating device, or some outside agent for power.

The D. & T. System has proven, after several seasons in use in numerous installations of different character, to be sound in principle, efficient in service, and in every way a desirable acquisition for any heating plant, and is guaranteed by the manufacturers to give perfect satisfaction, or failing in this, to be returnable at purchase price. We will replace any part that wears out in five years.



#### **ASBESTOS CEMENTS**



PLATE A

These Cements are absolutely fireproof, good non-conductors, and give general satisfaction. They are made up of Asbestos Fibre, Pulp, Magnesia and other ingredients to make them stick well and finish nicely.

Prices on application.

# PRICE LIST OF SECTIONAL PIPE COVERINGS AND FITTINGS.

Size, Inside Diameter Inches	Covering per Lineal Foot	Elbows, Each	Tees, Each	Crosses, Each	Valves, Each
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 22 .24 .27 .30 .33 .36 .40 .45 .50 .60 .65 .70 .80 1.00	.30 .30 .30 .30 .30 .36 .42 .48 .54 .60 .72 .90 1.30 1.80 2.40	.36 .36 .36 .36 .42 .48 .54 .60 .75 .90 1.20 1.60 2.20 3.00	.48 .48 .48 .48 .48 .54 .60 .70 .80 .95 1.10 1.50 2.00 2.80 3.60	.54 .54 .54 .54 .60 .78 .96 1.20 1.85 2.25 2.80 3.60
8 9 10 12	1.20 1.30 1.85	3.00 3.60	3.80 4.60	4.40 5.20	5.30 6.20

In order to prevent confusion we have but one price list for our different kinds of Coverings up to and including one inch in thickness.



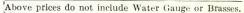
## GALVANIZED CIRCULATING BOILERS.

New	York Pa	ttern.	Phi	la. Hand-	Made Patr	tern.
Capac. Gal.	Size.	Price.	Size.	Reg.	E. H. or D. Riv.	E. H. & D. Riv.
$   \begin{array}{c}     18 \\     21 \\     24   \end{array} $	3 x 12 3 ½ x 12 4 x 12	$14.50 \\ 15.50 \\ 15.75$	3 x 12 3 ½ x 12 4 x 12	14.50 15.50	17.50 18.50	20.50 22.00
$\frac{24}{27}$	3 x 14 4 ½ x 12	$\frac{19.00}{18.50}$	3 x 14 4 ½ x 12	15.75 $19.00$ $18.50$	$\begin{array}{c} 19.00 \\ 22.50 \\ 21.00 \end{array}$	22.50 $26.00$ $25.00$
28 30 32	3 ½ x 14 5 x 12 4 x 14 5 x 13	20.25 $19.00$ $21.00$	3 ½ x 14 5 x 12 4 x 14	20.25 $19.00$ $21.00$	$24.00 \\ 22.50 \\ 24.50$	$27.50 \\ 26.00 \\ 27.50$
35 36 36	6 x 12 4 ½ x 14	$21.00 \\ 24.50 \\ 21.50$	5 x 13 6 x 12 4 ½ x 14	$21.00 \\ 24.50 \\ 21.50$	$24.50 \\ 29.50 \\ 25.50$	$28.00 \\ 34.50 \\ 29.00$
40 42 47	5 x 14 4 x 16 4 ½ x 16	$24.00 \\ 26.00 \\ 30.00$	5 x 14 4 x 16 4 ½ x 16	$24.00 \\ 26.00 \\ 30.00$	$27.50 \\ 30.00 \\ 35.00$	$     \begin{array}{r}       31.00 \\       34.00 \\       40.00     \end{array} $
48 52 53	6 x 14 5 x 16 4 x 18	$30.00 \\ 31.00 \\ 31.50$	6 x 14 5 x 16 4 x 18	30.00 31.00 31.50	35.00 36.00 37.00	40.00 41.00 41.00
63 66 79	6 x 16 5 x 18 6 x 18	38.00 38.00 44.00	6 x 16 5 x 18 6 x 18	38.00 36.00 44.00	43.00 41.00 51.00	48.00 46.00 56.00
82 98 100	5 x 20 6 x 20 5 x 22	45.50 61.50 63.50	5 x 20 6 x 20 5 x 22	45.50 54.00 54.00	52.00 60.00 60.00	57.00 65.00 65.00

PLATE A

## GALVANIZED STEEL EXPANSION TANKS.

Capacity, Gallons.	Size, Inches.	Tapped for Gauge, C. to C.	For Glass Length.	Price.
10 12	12 x 20	13 1/2	12	8.00
15	12 x 24	13 ½	14	8.50
	12 x 30	15 ½	14	9.00
18 20	12 x 36 14 x 30	$19\frac{1}{2}$ $15\frac{1}{2}$	$\begin{array}{c} 18 \\ 14 \end{array}$	9.50
24	14 x 36	19 ½	18	13.00
26	16 x 30	15 ½	14	14.00
$\frac{32}{42}$	16 x 36	19 ½	18	15.00
	16 x 48	25 ½	24	16.50
66 82	18 x 60	25 ½	24	31.00
	20 x 60	25 ½	24	37.00
$100 \\ 120$	22 x 60 24 x 60	25 ½ 25 ½	$\frac{24}{24}$	51.00 58.00





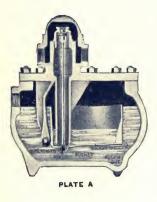
#### IDEAL EXPANSION TANKS.

Embedded Panel... 12.75 Round Cornered... 12.75 Beaded..... 12.50



# SQUIRES IMPROVED STEAM TRAPS.

#### FITTED WITH REGULAR VALVE AND SEAT.



Size Trap	Pipe Con- nection; Inches	Lineal Ft. of 1 Inch Pipe	Sq. Ft. of Ra- diation	Lbs. of Water per Hour	Price
A B C D E F G	1/2 3/4 1 1 1/4 1 1/2 2 1/2	3900 6000 8400 15600 24300 38700 98100	1300 2000 2800 5200 8100 12900 32700	400 600 850 1600 2500 4000 10100	$\begin{array}{c} 20.00 \\ 22.00 \\ 28.00 \\ 35.00 \\ 50.00 \\ 70.00 \\ 100.00 \end{array}$

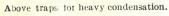
#### FITTED WITH UNLIMITED PRES-SURE VALVE MECHANISM.

Size Trap	Pipe Con- nection, Inches	Lbs. of Water per Hour	Price
C D	1 14	2700 3800	$\frac{34.00}{42.00}$
F C	1 1/2	5500 10000 20000	$60.00 \\ 84.00 \\ 120.00$

In ordering, state highest pressure.

# ANGELL EMERGENCY STEAM TRAPS.

Size No.	Pipe Connec- tions Inches	Lbs. Water per Hour	Price
2E 3E 4E 5E 6E 6EE 6EEE	34 1 1 14 1 1/2 2 2 2	3000 4200 6000 8000 12000 26000 46000	35.00 50.00 60.00 65.00 75.00 90.00 100.00



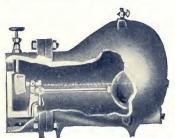


PLATE B

Size No.	Pipe Con- nections, Inches	Lineal Feet 1-Inch Pipe	Sq. Ft. Radiation	Lbs. Water   per Hour	Price
1	1/2	4000	1350	800	20.50
2	3/4	6300	2100	1300	22.50
3	1	9900	3300	2000	28.00
4	1 1/4	15000	5000	3000	35.00
5	1 1/2	21000	7000	4200	50.00
6	2	49800	16600	10000	70.00

# ANDERSON STEAM TRAPS.

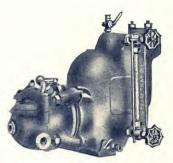
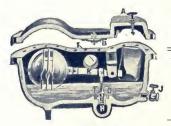


PLATE A

#### PRICES.

Size Number of Trap	1	2	3	4	5	6	7
Size of Pipe ConnectionInches	1/2	34	1	11/4	1 1/2	2	2 1/2
Maximum Discharge of Condensation, per hour	1500	2400	4000	5600	8000	12000	24000
face that should be applied	1000	1600	2600	4700	7000	10000	20000
Pipe Surface that should be applied. Net Weight of Complete TrapPounds Shipping Weight, BoxedPounds	$     \begin{array}{r}       3000 \\       81 \\       110     \end{array} $		150	166	268		525
Price	26.50	28.50	36,00	43.00	60.00	82.00	132.0

Each Trap furnished with Water Gauge, By-Pass, Air Valve, Blow-Off Valve and Sediment Strainer.



McDaniel Steam Traps.

No.	Inlet and Outlet	Drains	Each
1	1 in.	3500 ft. 1-in. pipe	$30.00 \\ 40.00 \\ 65.00 \\ 75.00$
2	1 ¼ in.	7000 ft. 1-in. pipe	
3	1 ½ in.	14000 ft. 1-in. pipe	
4	2 in.	20000 ft. 1-in. pipe	

PLATE B



# JENKINS DIAMOND TRAP.

BRASS OR IRON.



PLATE A

Size.,	Inches	1/2	34
Price	Each	3.50	4.00

#### EXHAUST PIPE HEADS.



PLATE B
Mc DANIEL.



PLATE C KEYSTONE.

#### MCDANIEL EXHAUST HEAD.

Size Ins.	2	2 1/2	3	312	4	4 1/2	5	6	7	8
Price	25.00	27.50	30.00	35.00	40.00	45.00	50.00	60.00	70.00	85.00
Size Ins.	9	10	12	14	15	16	18	20	24	
Price	105.00	120.00	150.00	175.00	185.00	200.00	225.00	250.00	300.00	

#### KEYSTONE EXHAUST HEAD.

SizeInches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2
Price.	12.00	14.00	16.00	18.00	21.00	24.00	27.00
SizeInches							
Price	30.00	36.00	43.00	50.00	85.00	100.00	

### WATSON SPRING REDUCING VALVE.

FOR STEAM PUMPS, ENGINES AND STEAM VESSELS.



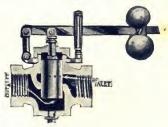
PLATE A

SizeInches	1 x 2	1 1/4 x 2 1/2	1 ½ x 3	2 x 4	$2\frac{1}{2} \times 5$	3 x 6	4 x 8	5 x 10	6 x 12
Price	20.00	26.00	33.00	45.00	60.00	80.00	115.00	150.00	180.00

#### WATSON REDUCING VALVE.

WITH LEVER.

FOR STEAM HEATING OR OTHER PLACES REQUIRING LOW
PRESSURE.



FOR STEAM ONLY.

#### ALL BRASS MADE, SCREWED ENDS.

					11/
Size	Inches	34	1	1 1/4	1 ½
Price		17.00	20.00	25.00	30.00
Price		11.00	20.00	20100	

#### IRON BODIES, FLANGED ENDS.

				Company of the second of	- 604 757		
SizeInches	2	2 1/2	3	4	5	6	8
Price	38.00	55.00	70.00	90.00	110.00	150.00	200.00

# KIELEY EUREKA LOW PRESSURE REGULATING VALVE.

For reducing Steam Pressure from the initial or high pressure carried, which may be as high as 150 pounds per square inch, down to any pressure on the reduced side less than 15 pounds, and from this point down to as low as 1 pound.



Size, Inches	Price, Each	Size, Inches	Price, Each	Size, Inches	Price, Each
34	20.00	3 1/2	85.00	4 x 8	187.50
1	22.00	2 x 4	72.00	5 x 10	242.00
1 1/4	28.00	2 1/2 x 5	96.00	8	275.00
1 1/2	35.00	3 x 6	126.00	9	350.00
1 1/4 x 2	33.00		100.00	10	350.00
1 14 x 2 1/2	42.50	4 5	135.00	12	470.00
1 ½ x 3	53.50	6	180.00	6 x 12	325.00
2	44.00	7	225.00	8 x 14	400.00
21/2	57.00	4 x 6	140.00	8 x 16	500.00

This valve can be made with the inlet and outlet end of different sizes than specified above. Prices on application.

## STANDARD DIAPHRAGM REDUCING VALVES.

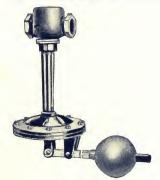


PLATE B

SizeInches	1/2	3/4	1	1 1/4	1 1/2	2
Brass, Screwed		18.00	18.00	20.00	24.00	30.00 27.00
SizeInches	2 ½	3	3 ½	4	5	6
Brass, Screwed Iron, Screwed		50.00 45.00	65.00 55.00	80.00 65.00	140.00 85.00	200.00 115.00



### WATSON WATER REDUCING VALVES.



PLATE A
DIAPHRAGM PATTERN.



PLATE B STANDARD PATTERN.

#### BRASS VALVES, SCREWED ENDS. DIAPHRAGM PATTERN.

- r				
SizeInches	34	1	1 1/4	1 1/2
Price	14.00	17.00	22.00	28.00

#### BRASS VALVES, SCREWED ENDS. STANDARD PATTERN.

				1		1	
SizeInches	1/2	34	1	1 1/4	1 ½	2	2 ½
Price	8.00	8.00	9.50	11.50	15.00	25.00	45.00

#### IRON BODY, FLANGED ENDS. STANDARD PATTERN.

SizeInches	3	4	5	. 6	8
Price	70.00	90.00	110.00	150.00	200.00



# AUTOMATIC SAFETY CYLINDER RELIEF VALVES.



Which is used on all kinds of Horizontal and Vertical Engines.

Size Inches	3 8	$\frac{1}{2}$	34	1	$1^{-1}4$	1 1/2
Each	6.50	7.00	9.50	10.50	12.50	16.00
SizeInches	2	$2\frac{1}{2}$	3	3 1 2	4	
Each		0.5 00	70 00	07 00	95.00	

It relieves the cylinder of all condensation automatically.

PLATE A

#### WATER RELIEF VALVES.

PRICES.



Size	Style of Base	Diameter of Side Outlet	Iron
2 inch 2½ inch 3 inch 3½ inch 4 inch 4½ inch 5 inch 5½ inch 6 inch	Screwed Screwed or 9 inch Flange Screwed or 9 inch Flange Screwed or 10 inch Flange Screwed or 11 inch Flange Screwed or 11 inch Flange Screwed or 12 inch Flange Screwed or 12 inch Flange Screwed or 14 inch Flange	2 j inch 2 j j inch 3 inch 3 k inch 4 inch 9 k inch Flange 9 k inch Flange 10 inch Flange	30.00 50.00 65.00 80.00 100.00 125.00 160.00 220.00 250.00

ATE D

In ordering, state pressure to be carried. If flange is desired, state diameter.

## CLIMAX CELLAR DRAINERS.

Curally Div. Locky 1/ 3 1 11/ 11/ 0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Automatic Movement 25.0040,0055.0080,00110.00160.000 Without Automatic Movement 15.0025.0035.0050.00 70.00100.000

#### McDaniel Suction Tee.

PATENTED

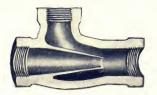


PLATE A

#### STANDARD TEES, 100 LBS. PRESSURE.

SizeInches	34	1	1 1/4	1 1/2	2	21/2	3
Price	.80	1.00	1.25	1.50	2.00	3.00	4.50

#### EXTRA HEAVY TEES, 250 LBS. PRESSURE.

SizeInches 1	1.4	1 1/2	2	21/2	3	3 1/2	4	5	6
Price 2.00	2.50	3.00	4.00	6.00	9.00	12.00	15.00	24.00	34.00

## McDaniel Syphon and Water Lifter.

PATENTED

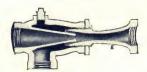


PLATE E

#### DESCRIPTION OF CUT.

A, Suction Pipe. B, Steam Connection. C, End of Cone, or Steam Delivery. E, Discharge.

No.	Diameter of Pipes, in Inches		Capacitie	s per Hour	Steam at 50 Lbs. Syphon near Water Level		
	Suction	Dis- charge	Size St'am Pipe to Use	Gallons	Cubic Ft.	Size, Inches	Price
0 1 2 3 4 5 6	$\begin{array}{c} & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\$	$ \begin{array}{c}     \begin{array}{c}                                     $	3 8 1 2 3 4 3 4 1 14 1 14 1 14	400 700 1100 1600 3000 5000 7000	52 90 140 210 400 660 983	$ \begin{array}{c}                                     $	5.00 6.00 8.00 10.00 12.00 20.00 25.00



## PIPE STOCKS AND DIES.



DIE PLATE, NOS. 0 TO 1 3-4.



DIE PLATE NO. 2.

No	00 Brass Pipe	0	1	1 1/2
Threads	58, 34, 78, 1, 1 14	½ to ½	14 to 1	34 to 1 h
Size Dies	2 x ½	2 x 1/2	238 X 34	3 x <sup>3</sup> <sub>4</sub>
Stocks Only	3.50 13.50 2.00 .25	3.50 9.50 1.50 .25	5.00 15.00 2.00 .35	6.00 13.50 2.50 .45
No	1 1/4	2	3 2 arm	4 4 arm
Threads	1 to 1 ½	1 1/4 to 2	21/2 & 3	21/2 & 3
Size Dies	3 x 34	3 1/8 x 1/8	4 1/8 x 1 1/4	4 1/8 x 1 1/4
Stocks Only	6.00 13.50 2.50 .45	9.50 20.00 3.50 .60	25.00 43.00 9.00 1.00	33.00 51.00 9.00 1.00



# ARMSTRONG'S ADJUSTABLE STOCK, AND DIES. FOR THREADING PIPE.



No. 1 Stock, 4 Right-hand
Pipe Dies, ½ to ½
Each
No. 1 Stock, 4 each Right
and Left Pipe Dies, ½
to ½......Each
No. 2 Stock, 5 Pipe Dies,
Right, ¼ to 1.....
No. 2 Stock, 6 Pipe Dies,
Right, ½ to 1.....
No. 2 Stock, 5 Pipe Dies,
Right and Left, ¼ to 1.
No. 2 Stock, 6 Pipe Dies,
Right and Left, ¼ to 1.
No. 2 Stock, 6 Pipe Dies,
Right and Left, ¼ to 1.
Stock, 6 Pipe Dies,
Right and Left, ½ to 1.
Stock, 6 Pipe Dies,
Right and Left, ½ to 1.

This Stock will also take Bolt Dies.

PLATE A

#### DIES.

Prices for Dies quoted mean set of two pieces, numbered 1 and 2.

	The second secon	
No. 1.	For Pipe 1/8, 1/4, 3/8, or 1/2, either Right or LeftEach,	1.25
No. 2.	For Pipe 18, 14, 38, 1/2, 34 or 1, either Right or Left Each,	1.50
No. 2.	For Brass Pipe 58, 34, 78, 1 or 114, either Right or Left Each,	2.00
No. 2½.	For Pipe, double ends, $\frac{1}{2}x^{\frac{3}{4}}$ or $1x1^{\frac{1}{4}}$ , either Right or Left. Each,	3.25
No. 3.	For Pipe, 34, 1, 114, 11/2 or 2 inches, Right or LeftEach,	4.00
No. 4.	For Pipe, Sectional Dies, 1, 11/4, 11/2 or 2 in., Right or Left Each,	3.00
No. 4.	For Pipe, Sectional Die Cutters only Each Cutter,	. 50
No. 6.	For Pipe, Double Ends, 2 1/2x3 inch, Right or Left. Each,	15.00
No. 7.	For Pipe, Double Ends, 2 ½x3 inch, Right or LettEach,	16.00
No. 7.	For Pipe, Double Ends, 3½x4 inch, Right or LeftEach,	16.00
No. 0.	Dies Bolt, $\frac{1}{4}$ , $\frac{5}{16}$ , $\frac{3}{8}$ , $\frac{7}{16}$ , $\frac{1}{2}$ , $\frac{9}{8}$ , or $\frac{3}{4}$ , Complete with Collet . Each, Dies Bolt, $\frac{1}{4}$ , $\frac{16}{16}$ , $\frac{3}{8}$ , $\frac{7}{16}$ , $\frac{1}{2}$ , $\frac{5}{8}$ , or $\frac{3}{4}$ , without Collet Each,	1.95
No. 0.	Dies Bolt, $\frac{14}{4}$ , $\frac{16}{16}$ , $\frac{3}{8}$ , $\frac{17}{18}$ , $\frac{12}{2}$ , $\frac{5}{8}$ , or $\frac{3}{4}$ , without Collet Each,	1.00
No. 1.	Dies Bolt, 14, 16, 38, or 76, Right HandEach,	1.50
No. 1.	Dies Bolt, ½, 58, or 34, Right HandEach,	1.75
No. 2.	Dies Bolt, ½ or 5%, Right Hand	2.00
No. 2.	Dies Bolt, 34, 7% or 1, Right Hand	2.00
No. 2.	Dies Bolt, 1 k or 1 k, Right Hand	2.25

Bolt Dies, Left Hand, will be furnished at same price.

Either No. 1 or No. 2 half of No. 1 Die for Pipe	.75
Either No. 1 or No. 2 half of No. 1 Die for Bolt	. 90
131th 1 140, 1 01 140. 2 half 01 140. 2 15k 101 1 periodicine	.90
THERE AO, I OF MO. 2 BRIEFOF NO. 2 DR FOT DIRES	1.25
Thence No. 1 of No. 2 half of No. 2 Die for Dott	$\frac{1.25}{1.75}$
Tablet A of D half of No. 2 2 Die for 1 ipc	$\frac{1.75}{2.25}$
Tather No. 1 of No. 2 half of No. 5 Die for Tipe	8.00
Extrict A of B half of No. 6 Die for Tipe	5.00
Either A, B, C or D quarter of No. 7 Die for Pipe	0.00

When ordering, please state which part of Die is wanted.

# ARMSTRONG'S ADJUSTABLE STOCKS, AND DIES. FOR THREADING PIPE.



PLATE A NO. 2 1-2.

No. 2 1/2 Stock, 4 Dies, Cutting 1/2, 3/4, 1 and 1 1/4 inch Right Hand	12 00
No. 2 ½ Stock and Dies, Cutting Right and Left. ½ to 1 ¼ inch	18 00
No. 3 Stock, 3 Sizes Pipe Dies, 1 ¼ to 2. Right	20 00
No. 3 Stock, 4 Sizes Pipe Dies, 1 to 2. Right.	91 00
No. 3 Stock, 5 Sizes Pipe Dies, 34 to 2, Right	28 50
No. 3 Stock, 3 Sizes Pibe Dies, 14 to 2 Right and Left	20 00
No. 3 Stock, 4 Sizes Pipe Dies, 1 to 2. Right and Left	10 00
No. 3 Stock, 5 Sizes Pipe Dies, 34 to 2, Right and Left	48.50



PLATE B NO. 7.

No. 6 Stock and Die, Cutting 2½x3, Right Hand	0.00
No. 6 Stock and Die, Cutting 2 1/2x3, Right and Left Hand	5 00
No. 7 Stock, Cutting 2 1/2, 3, 3 1/2, 4, Right	00.00
No. 7 Stock, Cutting 2½ and 3, Right. 4 No. 7 Stock, cutting 3½ and 4, Right. 4	5.00
No. 7 Stock, Cutting 3/2 and 4, Right and Left	5.00
No. 7 Stock, Cutting 2½ and 3 or 3½ and 4, Right and Left	2.00

#### EXTRA PARTS.

SizeInches	1	2	214	3	4	6	7
Stocks Only Each Bushings Each Wrenches Each	. 20	$4.00 \\ .25 \\ .25$	4.50 .40 .25	7.00 .50 .50	7.00	$25.00 \\ 1.00 \\ .50$	30.00 1.50 .75



#### TOLEDO ADJUSTABLE THREADING DEVICES.







No. 0 Threads pipe from 1/8 to 3/4 inch inclusive. Complete with Right Hand Dies........... 16.00

No. 1 Threads pipe from 1 to 2 

#### EXTRA DIES FOR NO. 1 AND NO. 1A.

1 inch, per Set of 4 Pieces 1 1/4 inch, per Set of 4 Pieces	. 50 . 50



PLATE C. NO. 10.



PLATE D. NO. 2, RATCHET.



PLATE E. NO. 3, RATCHET.

Threads pipe from 21/2 to 4 inch, inclusive...... 100.00 Threads pipe from 4 1/2 to 8 inch, 

EXTRA DIES FOR NO. 2.

EXTRA DIES FOR NO. .3

21/2, 3, 31/2 4 inch. Per Set of 5 Pieces..... 8.00

4 12, 5, 6, 7, 8 inch. Per Set of 5

Pieces..... 12.00

# NYE ADJUSTABLE DIE STOCKS.



PLATE A. NO. 25.
Threads ½ to 1 inch, inclusive.

Equipped with	
Equipped with one set of chasers threaded on both ends, and threading from	
Equipped with one set of chasers threaded on both ends, and threading from ½ to ¾ inch, inclusive.  Equipped with two sets of chasers, one threading ½ to ¾ inch, inclusive, and the other threading ½ and 1 inch thus threading ¼ sinch, inclusive,	18.00
Extra chasers only threaded on both and anti-	23.00
sive. Strachasers only cutting 1/8 and 1 inch. Per Set, Per Set,	5.00



PLATE B. NO. 30.
Threads ½ to 2 inches, inclusive.

This is a line of the state of t	
This tool equipped with one set of chasers threading from 1 to 2 inches, in-	
Ciusive.	25.00
clusive. Equipped with extra chasers threading ½ and ¾, making the complete range from ¼ to 2 inches	=0.00
from ½ to 2 inches.  Extra chasers only threading 1 to 2 inches, inches inclusive.	30.00
Extra chasers only threading 1 to 2 inches, inclusive. Per Set,	8.00
Extra chasers only threading ½ and ¾ inch	6.00



PLATE C. NO. 35. RATCHET.
Threads 1 to 2 inches, inclusive.

This tool equipped with one set of chasers threading from 1 to 2 inches, in-	
Extra chasers only threading 1 to 2 inches, inclusive Per Set,	$\frac{30.00}{8.00}$

# CJ. Rainear. &. Co. 3



#### NYE DIES.



PLATE A. SOLID.

SOLID DIES.

PLATE B. ADJUSTABLE.

Size block 4x4x 1/8	Size block 3x3x 34	Size block 2½x2½	Size block
for No. 2 Stock	for 1 ½ & 1 ¾ Stock	x¾ for No. 1 Stock	2x2x ½
1 ½ inch. Each, 5.00	½ inch. Each, 3.50	34 inch. Each, 3.00 35 inch. Each, 3.00 36 inch. Each, 2.50 36 inch. Each, 2.50 37 inch. Each, 2.00	35 inch. Each, 2.50 14 inch. Each, 2.50 18 inch. Each, 2.00

#### ADJUSTABLE DIES TO FIT ARMSTRONG STOCKS.

And the state of t	
1/8 inch to 1/2 inch to fit No. 1 stock	3.50
% Inch to 1 Inch to fit No. 2 stock	3.50
½ inch to 1¼ inch to fit No. 2½ stock Each,	5.00
½ inch x ¾ D. E. inch to fit No. 2½ stock. Each,	5.00
1 inch x 1 ¼ D. E. inch to fit No. 2 ½ stock Each, ½ inch to 2 inch to fit No. 3 stock Each,	5.00
2 ½ inch x 3 D. E. inch to fit No. 6 stock Each,	$\frac{5.00}{25.00}$
3½ mch x 4 D. E. inch to fit No. 7 stock	25.00
Tacil,	00.00

# SOLID SQUARE BOLT DIES.

FOR MACHINE USE.



PLATE C

Size	Number of Threads	Size of Square, Inches	Thick- ness, Inches	Price	Size	Number of Threads	Size of Square, Inches		Price
1/4 5 6 3 7 6 12 9 6 8 16 3 4 36 11 7 8	16, 18, 20, 16, 18, 14, 16, 18 12, 14, 16 12, 13, 14 12, 14 10, 11, 12 11, 12 10, 12 10 9, 10, 12		1/1/27/27/27/27/47/47/47/47/47/47/47/47/47/47/47/47/47	1.80 1.80 1.80 1.80 1.80 1.90 2.00 2.10 2.20 2.30 2.40	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 8, 12 7, 8 6 6 5, 5 ½ 4 ½, 5 4 ½, 5	2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 2 1/2 3 3 1/2 3 3 3/4	3/4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2.55 2.70 3.00 3.30 3.60 3.90 4.20 5.40 6.50 7.50

Will send above  $\sqrt{2}$  oversize, with threads indicated by the heavy type, V form, unless otherwise ordered.



# THE FORBES' PIPE CUTTERS.



PLATE A
NO. 56 HAND MACHINE



PLATE B
NO. 78 HAND OR POWER MACHINE

In comparing our prices with those of other makers, we call special attention to the fact that our Stock is a complete tool, with which a pipe can be threaded or cut off without the aid of a vise, and to the ease with which the work is accomplished. This is the distinguishing feature of the Forbes' Patent Die Stock.

The shells are adjustable for wear, which greatly prolongs the life of the machine. Its parts can be duplicated, when worn out, at a small cost.

Hand or Power Machine	Hand Machine	Range	Hand Machine Price	Hand or Power Machine Price
No. 70* No. 72* No. 72* No. 76* No. 76* No. 80* No. 80* No. 84* No. 86* No. 90† No. 90† No. 98* No. 98* No. 98* No. 98* No. 98* No. 98*	No. 30* No. 32* No. 34* No. 36* No. 46† No. 40* No. 40* No. 50† No. 50† No. 54† No. 56† No. 62† No. 58* No. 60*	14 to 2 in., both Right and Left 14 to 2 in., for Solid Dies (without dies) 1 to 3 in., R. H., 1 to 2 inches L. H. 14 to 3 in., R. H., 4 to 2 inches L. H. 14 to 3 in., R. and L. 15 to 4 in., R. H. 15 to 4 in., R. H. 1 to 4 in., R. H. 1 to 4 in., R. and L. 1 to 6 in., R. H. 212 to 6 in., R. H. 213 to 6 in., R. H. 214 to 6 in., R. H. 215 to 6 in., R. H.	50.00 45.00 75.00 85.00 85.00 105.00 85.00 110.00 110.00 130.00 130.00 150.00 300.00 190.00	100 .00 95 .00 125 .00 135 .00 140 .00 150 .00 165 .00 160 .00 170 .00 180 .00 200 .00 225 .00 285 .00 535 .00
No. 100† No. 102† No. 104* No. 106* No. 107†	No. 63* No. 64† No. 66† No. 67* No. 68* No. 69†	2½ to 8 in., R. and L. 2½ to 8 in., R. H. 2½ to 10 in., R. H. 2½ to 10 in., R. H. 2½ to 10 in., R. and L. 2½ to 12 in., R. H.	360.00 $325.00$ $500.00$ $500.00$ $550.00$ $650.00$	700.00 700.00 750.00 900.00

<sup>\*</sup> Pressure feed machine.

t Leader screw.

### STILLSON WRENCHES.



PLATE A

Length when Open	6	8	10	14	18	24	36	48
Grips {	to	to	to		to	14 wire to 2½ pipe	14 pipe to 3 ½ pipe	1 pipe to 5 pipe
Wrench, Complete JawsEach FramesEach Steel Handles.Each NutsEach Wood Handles.Each	2.00 .75 .35 .95 .11	2.00 .75 .35 .95 .11	2.25 .80 .40 1.10 .14	3.00 1.00 .50 1.45 .17 .25	4.00 1.33 .55 2.10 .22 .28	6.00 2.10 .80 3.20 .35	12.00 4.75 1.30 6.40 .55	18.00 7.2 1.5 9.2 .9

# TRIMO PIPE WRENCHES.



PLATE B

Length Open	6	8	10	14	18	24	36	48
Takes from	1/8 wire to 1/2 pipe	to	to	to	to	1/4 wire to 2 1/2 pipe	½ pipe to 3½ pipe	1 pipe to 5 incl
Price. Each Jaw. Each Nut. Each Inserted Jaw. Each Frame. Each	2.00 .67 .20 .25 .25	2.00 .67 .20 .25 .25	2.25 .75 .27 .33 .33	3.00 1.00 .35 .50 .45	4.00 1.33 .42 .55	6.00 2.00 .50 .65	12.00 4.00 .65 1.00 .75	18.00 6.00 .80 1.25 1.00



# STRAP PIPE WRENCHES.

FOR BRASS AND NICKELED PIPE.



PLATE A
PARMELEE'S GIRDLE PIPE WRENCH.

PLATE B HAYDEN PIPE WRENCH.

#### PARMELEE'S GIRDLE PIPE WRENCH.

10 in the NY	
10 inch, No. 1 Wrench, 38, 12, 34, 1 inch, complete	5 . 00
and then, and, and writing the first the state of the sta	7 (31)
25 inch, No. 3 ½ Wrench, Improved, 1 ½, 2, 2 ½, 3 inch, complete	7.50

#### STOCKS.

#### GIRTHS.

10 inch, No. 1 Each, 2.25 20 inch, Improved, No. 2½ Each, 2.50 25 inch, Improved, No. 3½ Each, 3.00	For 20 and 25 inch Stocks:	$\frac{.75}{1.25}$
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#### HAYDEN PIPE WRENCH.

No	2	3
Takes PipeInches		11/4, 11/2 & 2
Price, with One Size Clamp Only. Each Extra Clamps. Each Wrench Bar Only. Each	7.5	4.00 1.50 2.50



0/

PLATE C WARNOCK WRENCH. PLATE D
REED STRAP WRENCH.

#### WARNOCK WRENCH.

12-inch Wrench, complete, 1/8 to		18-inch Wrench, complete, 1 to	
2 inch pipe Each,	1.50	5 inch pipe Each,	2.50
12-inch Strap, ready for use. Each,	. 25	18-inch Strap, ready for use. Each,	. 50

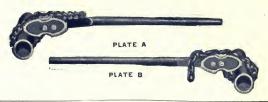
#### REED STRAP WRENCH:

LengthInches	12	18
CapacityInches		1 to 5
Wrench. Each Straps Each	1.50 .25	2.50 .50



# VULCAN BIJAW CHAIN PIPE WRENCHES. WITH DOUBLE-ENDED REVERSIBLE JAWS, AND EITHER CABLE OR FLAT LINK CHAIN.

FOR TURNING OR HOLDING PIPE, PIPE FITTINGS, BOLTS, BARS, SHAFTS, ETC., FROM 1-8 TO 12 INCHES DIAMETER.



No	30	31	32	33	33 ½	34	35
Capacity Size Pipe In. With Flat Link Chain Ea. With Cable Chain Ea. Extreme Length In. Weight Lb.	$\begin{array}{c} 2.50 \\ 2.25 \\ 13\frac{3}{4} \end{array}$	1/8 to 1 1/2 3.50 3.25 20 5 3/4	14 to 2½ 5.00 4.50 27 10	34 to 4 7.00 6.25 37 16	1 to 6 9.00 7.75 44 ½ 24	1½ to 8 11.00 9.50 50½ 31	2 to 12 18.00 16.00 64½ 50
Extra Jaws. Pair Extra Flat Link Chain Ea. Length. In Breaking Strain Lb. Extra Cable Chain Ea. Length. In Size Iron. In. Breaking Strain. Lb.	$\begin{array}{r} .75 \\ 9\frac{1}{2} \\ 3,600 \\ .50 \\ 9\frac{3}{4} \end{array}$	$ \begin{array}{c} 1.75 \\ 1.00 \\ 13\frac{1}{2} \\ 6,700 \\ .75 \\ 14\frac{1}{2} \\ 4,000 \end{array} $	2.75 1.50 17½ 9,800 1.00 18	$\begin{array}{c} 4.00 \\ 2.50 \\ 22\frac{1}{2} \\ 12,500 \\ 1.75 \\ 27 \\ 7_{6} \\ 10,500 \end{array}$	$\frac{2.00}{33\frac{1}{2}}$	5.50 4.00 39 15,700 2.50 42 33 15,000	$7.50$ $6.00$ $54\frac{1}{2}$ $21,800$ $4.00$ $57$ $37$ $19,000$

# AGRIPPA CHAIN PIPE-FITTINGS WRENCHES. WITH FLAT LINK CHAIN ONLY.



#### PLATE C

No	20	21	22	23	$23\frac{1}{2}$	24	25
Capacity Pipe FittingsIn. Price Ea. Extreme Length In. Weight Lb.	$\frac{2.50}{1334}$	1/8 to 1 1/2 3.50 20 5 3/4		34 to 4 7.00 37 17	1 to 6 9.00 44 ½ 24	11.00	2 to 13 18.00 64½ 56
Extra Jaws Ea. Extra Chains Ea. Length In. Breaking Strain Lb.	1.00	1.75 1.25 15 6,700	$2.75$ $1.75$ $19\frac{1}{2}$ $9,800$	4.00 $2.75$ $26$ $12,500$	4.75 3.75 34 14,300	5,50 4.50 45 15,700	7.50 6.75 61 21,80

## COE'S WRENCHES



#### PLATE A

SizeInches	6	8	10	12	15	18	21
BlackPer Dozen	9.00	10.00	12.00	14.00	$24.00 \\ 26.00$	30.00	36.00
BrightPer Dozen	10.00	11.00	14.00	16.00		32.00	38.00



#### PLATE P

28 inchEach	0 75
26 inch	9.70
36 inchEach	10 00
48 inch	10.00
48 inch Each	47.00

# ENGINEERS' WRENCHES.



PLATE C

SizeInches	6	8	10	12	15	18	21
BlackPer Dozen	9.00	10.00	12.00	14.00	24.00	30.00	36.00
BrightPer Dozen	10.00	11.00	14.00	16.00	26.00	32.00	38.00

# TRIMO MONKEY WRENCHES.



PLATE D

SizeInches	6	8	10	12	15	18	21
BlackPer Dozen	9.00	10.00	12.00	14.00	$\frac{24.00}{27.00}$	30.00	36.00
PolishedPer Dozen	10.50	11.75	14.50	16.50		33.00	39.00

#### TRIMO PIPE CUTTERS.



#### PLATE /

Size No	1	2	3
Cuts Pipe Inches	½ to 1¼	½ to 2	1 1/4 to 3
PriceEach	4.50	6.00	10.00
Extra Nuts. Each Extra Wheels. Each Extra Rolls. Each Extra Pins with Cotter Pins. Per Dozen Extra Anti-Friction Washers. Per Dozen Extra Fork Block Carrier. Each Extra Block. Each	.35 .30 .30 1.00 .60 .10 1.25 2.00	.35 .30 .30 1.00 .60 .10 1.25 2.25	.40 .40 .40 1.00 .60 .10
Extra Frame	1.00	1.25	2.00

# SAUNDERS' ONE WHEEL AND ROLLER PIPE CUTTERS.



#### PLATE B

No	1	2	3	4	5
Cuts Pipe Inches	1/8 to 1	1 to 2	2 to 3	2½ to 4	4 to 6
Price Each Extra Block and Wheel Each Extra Wheels Each Extra Rollers Each Extra Pins Each	$1.25 \\     .24 \\     .24$	4.50 1.75 .32 .32 .10	11.00 2.75 .60 .50 .15	18.00 3.50 .60 .50 .15	$28.00 \\ 4.00 \\ .60 \\ .60 \\ .15$

## BARNES PIPE CUTTERS.

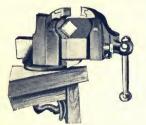


#### PLATE

No	1   2	3	4	5	6	7
Cuts Pipe Inches	to 1 ½ to 2	1 ½ to 3	2½ to 4	4 to 6	6 to 8	9 to 12
Price Each Extra Wheels Each Extra Wheel Pins. Each	1.50 6.00 .25 .30 .10 .10	10.00 .40 .10	20.00 .50 .20	30.00 .75 .20	40.00 .75 .25	50.00 .75 .25



### SMITH'S COMBINATION VISES.



No	1	2	3
TakesInches	1 s to 2	½ to 3	¼ to 4
Each	16.00	20.00	28.00

PLATE A

# WALWORTH VISES.

5 inch Jaw. Takes 18 to 6 inches.



PLATE B

# MALLEABLE IRON IMPROVED HINGE OR OPEN JAW PIPE VISES.



PLATE C



PLATE D

THIS STYLE OF PATTERN, NOS. 1 AND 2. THIS STYLE OF PATTERN, NOS. 3, 4 AND 5

3.7		
No. 1, holds 1/8 to	2-inch pipe	10.00
NO. 2. HOIGS 4 10	3-Inch pipe	13 00
.vo. o. norus % 10	4-10CH DIDE	91 00
NO. 4. HOIGS 2 10	b-Inch pipe	30 00
NO. 5, HOIGS 2 1/9 10	8-IIICII DIDE	45 00
No. 6, holds 4 to	12-inch pipe	70.00

#### VULCAN CHAIN PIPE VISES.

No. 2.	For	r p	ìį	e	5	şi	Z	e	Š,		1	8	t	C	)	$^{4}$	i	n	s		. ]	Е	a	el	h,	5.	. 0
Base																					. ]	E	a	cl	n.	1.	. 0
Jaws																						H	);	ıi	r.	2	2
Chain a	nd s	Sei	e	w								ì	ì		ì	ì	ì								Ξ.	1	5
Screw					ľ	Ċ			i		i	i	i	i	i	i	ì	ì									9
Handle	and	N	lu	t.	ì	ì	ì	ì	ì	Ì	i	i	i													1	ĩ
Washer.															·	Ī											.)



PLATE A

#### SEVEN POUND PIPE VISES.



No. 0. Pipe, 1/8 to 21/2 inches..... Each, 4.50

## NYE PIPE VISES.





# ENGINEERS' FAVORITE FLUE CLEANERS.



#### PLATE A

01 7 7			-								
Size Inches 13	1 9 19	1/191/	0.3	9	0.12	91/	0.3		4 1 2	-	0
The state of the s	4	4 4 72	- 4	.)	0) 74	0 . 5	0 4	-1	4 4		6
Drice De-base	0 0 000										
Price Each 2.0	0.2.00.2	25 9 50	9 75	3 00	2 95	2 50	2 75	1 00	5 00	0 0 =	- "O
			~ . ( ()		17 . ~ 1	0.00	17 . 6 17	* . UU	0.00	0 . 20	4 . 00

# INGALLS' TUBE CLEANERS.







PLATE C. WITH BRUSH.

Size	Inches	2	21/4	2 1/2	234	3	31/4	3 1/2	4	4 1/2	5	6
Price With Brush	Each Each	$\frac{2.00}{2.50}$	$\frac{2.25}{2.85}$	$\frac{2.50}{3.15}$	$\frac{2.75}{3.45}$	$\frac{3.00}{3.75}$	$\frac{3.25}{4.05}$	$\frac{-}{3.50}$ $\frac{3.50}{4.40}$	4.00 5.00	$\frac{4.50}{5.65}$	${5.00}$ $\frac{5.00}{6.25}$	6.00 7.50

# SPIRAL WIRE FLUE BRUSHES.



PLATE

SizeInches	1 1 1/4	1 1/2	1.34	2	21/4	21/2	234
TinnedEach 1.BlackEach	1 . 10	1.20	1.20	1.25	1.40	1.50	1.60
SizeInches	3 1/4	3 ½	4	4 1/2	5	6	
TinnedEach 2. BlackEach 1.	$\begin{array}{c c} 80 & 3.00 \\ 75 & 3.25 \end{array}$	3.30 3.50	3.75 4.00	4.00	4.25	4.75	

# COOK'S STEAM BOILER TUBE CLEANERS. INCLUDING TWO NIPPLES AND TWO HOSE CLAMPS.



PLATE E

No. 1.	1 to 1 34 in., tube takes ½ in. steam pipe and 34 in. steam hose	9.00
NO. 2.	2 to 2½ in., tube takes ½ in, steam pipe and ¾ in steam hose	10.00
140 9'	2 4 10 3 4 III., tube takes % in, steam pine and 1 in steam hose	12.00
140. 4.	3 ½ 10 4 III., Tube takes 1 III. steam pipe and 1 ¼ in steam hose	14.00
TAO. 9.	474 to 5 Ill., tilbe takes 1 in steam nine and 1 1/4 in steam hose	16.00
No. 6.	5½ to 6 in., tube takes 1¼ in. steam pipe and 1½ in. steam hose	18.00



#### RAINBOW PACKING

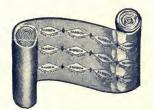


PLATE A

### SMOOTH-ON ASBESTOS SHEET PACKING.



PLATE B

Prepared in Rolls 10 yards long, 40 inches wide, 1/32 and 1/16 inch thick...Per Pound, 1.25



#### PLATE C ROUND.

#### PISTON PACKING



PLATE D

Round and Square, ¼ to 1½ inch, 12 feet in a coilPer Pound,	.85
Rubber Back, Square, ¼ to 1½ inch, 12 feet in a coilPer Pound,	1.00
Piston Pump Packing, ¼ to 1¼ inch, 12 feet in a coilPer Pound,	1.00



## STEAM SHEET PACKING.



PLATE A

Cloth insertion; cloth one side, cloth both sides.

Thickness	1-Ply	2-Ply	3-Ply	4-Ply
1 inch	.70			
15 inch	. 65	63	66	
3 inch	. 55	. 58	. 61	
3 inch	. 55	. 55	. 58	.61
¼ inch	. 55	. 55	. 55	. 55

One-ply cloth to every 16 inch thickness.

Three cents per pound additional will be charged for each extra ply.

All packing is one yard wide, and any length desired.

# SMOOTH-ON COATED CORRUGATED GASKETS



PLATE B
FULL WIDTH GASKET



PLATE C NARROW WIDTH GASKET

The best gaskets for flanged joints for any pressure or temperature, for Steam, Water, Oil, Air or Ammonia.

List price, one cent per square inch, surface measurement.



# CJ. Rainear. &. Co. B





### PLATE A

	D. Foot	.07
In Bales of about 300 square feet each,	14 in. thick Per Sq. Foot,	.08
		.091/2
In Dates of descent	3/ in thick . Per Su, 1000	.11
In Bales of about 300 square feet each, In Bales of about 300 square feet each,	1 in. thickPer Sq. Foot,	131/2
In Bales of about 300 square feet each, In Bales of about 300 square feet each,	1 1/4 in. thick Per Sq. Foot,	.16
In Bales of about 300 square feet each, In Bales of about 300 square feet each,	1 1/2 in. thick Per Sq. Foot,	.21
In Bales of about 300 square feet each, In Bales of about 300 square feet each,	2 in thick Per Sq. Foot	. 41

### OAKUM.



PLATE B

# LAMP WICK.



PLATE C

## MANILA ROPE.

# COTTON WASTE.



PLATE D



PLATE E

Prices on application.

# ASBESTOS WICK PACKING.



PLATE F

Per Pound,	.50
Standard Asbestos Wick Packing Per Pound.	7.5
Standard Asbestos Wick Packing.  XX Asbestos Wick Packing for Wire Wiping, Caulking, etc.  Per Pound, Per Pound,	. 50
AX Aspestos wick lacking for the triplet and the Per Pound,	. 50
Canaday Ashestos Wick Packing	-

## SMOOTH-ON PRODUCTS.



#### PLATE A

### SMOOTH-ON IRON COMPOUNDS, Nos. 1 and 2 IN BLUE LABELED CANS

Are chemical Iron Cements for repairing leaks or breaks in castings and for making connections in steam or hydraulic work. They withstand fire. No. 1, quick hardening. No. 2, slow hardening and hydraulic. Applied as a paste or putty. Prepared and sold in Powder Form. Must be applied to cold metal.

### SMOOTH-ON ELASTIC CEMENT, No. 3 IN GRAY LABELED CANS

An Iron Cement, especially prepared for use on all seams of boilers or tanks to stop leaks, also for boiler patching and for screw-thread joints. Prepared and sold in Putty Form. This cement is hardened by heat. Applied as a paint, paste or putty. May be applied to hot metal.

### SMOOTH-ON CASTINGS CEMENT, No. 4 IN YELLOW LABELLO CANS

Is an Iron Cement for repairing blemishes, blowholes or defects in iron or steel castings, made in two grades. Prepared and sold in Powder Form. Applied as a

### SMOOTH-ON HUB JOINTS, No. 5 IN RED LABELED CANS

Is an Iron Caulking Cement for bell and spigot cast iron soil and greenhouse pipes, in place of caulking lead and in combination with lead.

# SIMPLEX PIPE CLAMPS.

#### PRICE LIST

Size, Inches	Price Size, Inches	Pri
1/2	1.50 9	15
34	1.50 10	18
1/4	1.50   12	22
1/2	2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	31 .
	2.25 3.00 16	33. 36.
1/2	3.75 18	40
1/2	±.90   20	45
1/2	0.20   21	50
1/4	6.00 6.75 7.50 22	55.
	7.50 26	60.
• • • • • • • • • • • • • • • • • • • •	9.00   28	70
	10.50 30	76.
	13.00 1 32	82.

# PORCELAIN ENAMELED BATHS.



PLATE A

### THE "COLONNA"

Porcelain Enameled Iron "Colonna" Flat Bottom Bath Tub, with 3-inch Roll Rim. Drilled 2½-inch Overflow Hole, 13s-inch Cock Holes, 3½ inches center to center.

Width Over Rim.	
Width Inside	23½ in.
Depth Inside	17 in.
Height from Floor to Top or Rim	$22\frac{1}{2}$ in.
Center of Outlet in Tub to Edge of Rim	7¼ in.

Nominal SizeFeet	4	4 1 5	5	5 1/2	6
Length Over RimInches Approximate Shipping WeightPounds	50 ½ 270	56 ½ 290	62 ½ 330	68 ½ 355	$\frac{74 \frac{1}{2}}{390}$
As Described	24.00	24.00	27.00	30.75	35.25

144

## PORCELAIN ENAMELED BATHS.



PLATE A

### THE "BARONESS"

Porcelain Enameled Iron Flat Bottom "Baroness" Bath Tub on Painted Base.

Fitted with Nickel-plated Brass Low Bell Supply and Waste Fixture with ½-inch
Supply Pipes, Compression Valves with China Indices and China Index on Waste.

Note—Base can be furnished enameled, if desired.

#### DIMENSIONS

Width Over Rim		in.
Width Inside	23 1/2	in.
Depth Inside	17	in.
Height from Floor to Top of Rim	22	in.
Width of Rim	3	in.

Nominal Size Feet	4	4 ½	5	$5\frac{1}{2}$	6
Length Over RimInches	50 ½	56 ½	62 ½	68 ½	74 1/2
As DescribedBath Tub Only, Drilled for Fixture shown	48.00 30.00	48.00 30.00	53.00 35.00	58.00 40.00	63.00 45.00

### PORCELAIN ENAMELED LAVATORIES.

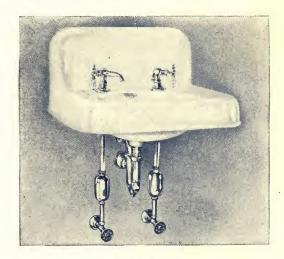


PLATE A

Porcelain Enameled Lavatory, with Slab, Apron, Oval Bowl, Overflow and Back All in One Piece, Concealed Wall Hanger, Nickel-plated Waste Plug, Rubber Stopper, Chain Stay and Chain.

12 x 15 in. 10 in.
10 in.
18 x 24 in

## PORCELAIN ENAMELED LAVATORIES.



PLATE A

Porcelain Enameled Lavatory, with Slab, Oval Bowl, Overflow and Back All in One Piece, with Concealed Hangers, Nickel-plated Waste Plug, Coupling and Rubber Stopper.

Width	19 in.
Depth	16 in.
Bowl	13 in.
Height of Back	6 in.
Enameled Inside, Less all Nickel-plated Fittings	6.50

### PORCELAIN ENAMELED LAVATORIES.



PLATE A

Porcelain Enameled Corner Lavatory, with Slab, "D" Pattern Bowl, Overflow and Back All in One Piece, with Concealed Hangers, Nickel-plated Waste Plug, Coupling and Rubber Stopper.

Length on Side	x		
Bowl		11 x 14 in	
Height of Back		8 in.	
Enameled Inside, Less all Ni	ckel-plated Fittings	7.75	

# IMPERIAL LOW-DOWN CLOSET OUTFIT.



PLATE A

PRICES ON APPLICATION.



# CLOSET TANKS.

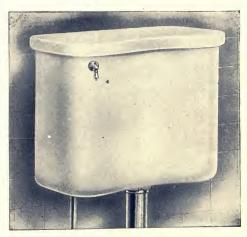


PLATE A
ROMAN, CHINA TANK.



PLATE B
ROMANIA, OAK TANK.

PRICES ON APPLICATION.

## CLOSET BOWLS.



"NEPTUNE" REVERSE TRAP CLOSET BOWL.



"VIKING" SYPHON JET CLOSET BOWL.



"SIREN" SYPHON ACTION CLOSET BOWL.

PRICES UPON APPLICATION.

## CLOSET SEATS.



PLATE A



Hardwood seat, 11/4 inch thick, with cover; piano polished, with nickel-plated brass offset post hinges (for low down closets) . .

Hardwood seat, 11/2 inch thick, with cover, piano polished, shaped to fit the body, with nickel-plated brass post hinges.

5.00



3.50

PLATE C

Hardwood seat, 11/4 inch thick, with cover, nickel brass post hinges......

2.00



PLATE D



PLATE E

Hardwood seat, 11/4 inch thick, with cover. Wood strip attachment to bowl with nickel-plated bolts.....

Hardwood square hopper seat, 2.00 with cover.....



# THE IMPROVED "IXL" ANTI-FREEZING AUTOMATIC LOW-DOWN CLOSET COMBINATION.

GALVANIZED TANK AND LID. GUARANTEED AGAINST FREEZING IF PROPERLY SET



PLATE A PRICES ON APPLICATION.



### IRON FLUSHING RIM HOPPERS.

ENAMELED INSIDE.

PAINTED OUTSIDE.



PLATE A

Tall Round Flushing Rim Enameled Hopper with 134-inch Brass Spud and Coupling, and Swing Seat and Weight.

## IRON HOPPER.



PLATE E



### RANGE URINALS.

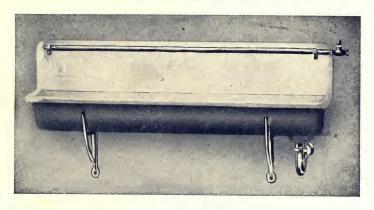


PLATE A

Roll Rim Public Urinal with Back on Brackets, with Brass Beehive Strainer.

Perforated Flush Pipe (Brass on Enameled and Galvanized Iron on Painted Urinals)

Loose Key Stop and Nickel-plated Vented "P" Trap.

Length Urinal	With Galvan-	With Brass	Without Trap	Without Trap
	ized Wash	Wash Down	Wash down	Wash Down
	Down Pipe	Pipe	Pipe and Stop	Pipe and Stop
	Painted	Enameled	Painted	Enameled
2 feet. 2 feet 6 inches. 3 feet . 3 feet 6 inches. 4 feet. 5 feet. 6 feet. 7 feet. 8 feet. 9 feet. 10 feet.	21.00 $22.25$ $25.00$ $28.25$	21 . 25 23 . 50 25 . 75 28 . 00 30 . 25 36 . 25 42 . 75 49 . 25 55 . 75 62 . 25 68 . 75 81 . 75	8.00 8.50 9.50 10.50 11.50 13.50 16.00 18.50 21.00 23.50 26.00 31.00	10.50 12.00 13.50 15.00 16.50 21.00 26.00 31.00 36.00 41.00 46.00 56.00

If without trap, deduct 5.75 list.

Urinals over 5 feet in length are made in two or more pieces. Can furnish galvanized finish if desired. Prices upon application.

Can be furnished with outlet on left end, but will be sent as shown, unless otherwise ordered.

Waste coupling for lead pipe is provided when urinal is furnished without trap.

Special length urinals can be furnished. Prices upon application.



# PORCELAIN ENAMELED URINALS.



PLATE A FLAT BACK



PLATE B

FLAT BACK.		
Number	1	2
Width of BackInches	12	15
Plain	$\frac{1.00}{2.00}$	1.30 2.50
Enameled	2.50	3.00

#### CORNER

CORNEL	١.			
Number	1	2	3	4
Length of Sides Inches	9	10	11	12
Plain. Galvanized Enameled	1.70	1.10 1.85 2.40	1.20 2.25 2.75	1.35 $2.75$ $3.25$

Can be furnished without recess in corner at same price.



PLATE C

Porcelain Enameled Flat Back Lipped Size, 15 inches high, 13 inches wide.	Urinal with Inlet and Ontlet Couplings.	
Enameled all over, as described.		)
Enameled inside, as described		)

### PORCELAIN ENAMELED KITCHEN SINKS.



PLATE A

Porcelain Enameled Roll Rim Sink and Back All in One Piece, with Concealed Wall Hanger, Nickel-plated Strainer, Fuller Adjustable Flange Bibbs and "P" Trap with Waste and Vent to Wall.

Wall to Center of Waste	612	in.
Center to Center of Faucet Hole	8	in.

### Enameled Inside, Less Faucets and Trap.

16 x 24 inch				 
18 x 24 inch			<u> </u>	 
18 x 30 inch				
18 x 36 inch				
20 x 30 inch				
20 x 36 inch 22 x 36 inch				
20 x 40 inch				
22 x 42 inch				
If with Painted B				
If with Porcelain				
If with Vented "F	" Trap, Ac	1d		 
If with Bibbs, Ado	g per Pair			 
If with Colmoniand				
If with Galvanized	1 Air Cham	pers, Add	per Pair	 
If with Galvanized If with Painted Le If with Enameled	egs, Add pe	r Pair		 

# WROUGHT STEEL KITCHEN SINKS.

WITH CAST IRON COUPLING FOR LEAD PIPE.



PLATE A ROLL EDGES.

No	01	01 1/2	02	02 1/2	03	04	05	06
Width. Inches Length. Inches Depth. Inches	24	18 24 6	18 30 6	20 20 6	18 36 6	20 30 6	20 36 6	20 40 6
Plain. Each Painted inside and out Each Galvanized inside and out Each Galvanized inside and out Each Blue Enameled inside and out Each Agate Enam. (Gray) inside and out Each Crystal Enam. (Lig. Gray) in. and out Each White Enameled (Blue outside) Each	2.10 $2.60$ $3.60$ $4.60$ $4.85$	2.35 2.85 4.10 5.10 5.35	2.60 $3.35$ $4.60$ $5.60$ $5.85$	2.60 $3.35$ $4.60$ $5.60$ $5.85$	3.35 $4.10$ $5.60$ $6.60$ $6.85$	3.10 $3.85$ $5.35$ $6.35$ $6.60$	3.85 $4.60$ $6.35$ $7.35$ $7.60$	$\frac{4.60}{5.35}$ $\frac{7.35}{8.35}$ $\frac{8.35}{8.60}$

Plug strainers will be supplied with sinks when ordered. For sinks with couplings threaded for 1½ inch iron pipe, add 20 cents

### WITH IMPROVED BRASS STRAINER COUPLING FOR LEAD OR IRON PIPE.

No	010	015	020	025	030	040	050	060
WidthInches		18	18	20	18	20	20	20
LengthInches DepthInches		24 6	30	20 6	36 6	30 6	36 6	40 6
PlainEach	2.85	3 10	3 35	3 35	3.85	3 60	4 35	5.1
Painted inside and out Each	3.10	3.35	3.60	3.60	4.35	4.10	4.85	5.6
Galvanized inside and outEach Blue Enameled inside and outEach	4.60	5.10	5.60	5.60	6.60	6.35	7.35	.8.3
Agate Enam. (Gray) inside and out Each Crystal Enam. (Lgt.Gray) in, and out Each								
White Enameled (Blue outside)Each	6.35	6.85	7.60	7.60	8.60	8.35	9.35	10.3

Coupling always sent for lead pipe unless otherwise ordered.

Brass plug strainer with rubber stopper will be furnished at same price as improved brass strainer.

# WROUGHT STEEL KITCHEN SINKS. WITH CAST IRON COUPLING FOR LEAD PIPE.



PLATE A FLAT EDGES.

No		$1^{-1}\frac{7}{2}$	2	$2^{1}{}_2^{\prime}$	3	4	5	6
WidthIn.			18	20	18	20	20	20
LengthIn. DepthIn.		24	30	20 6	36	30	36 6	40
PlainEa. Painted inside and outEa.	$\frac{1.75}{2.00}$	2.00	2.25	2.25	2.75	2.50	3.25	4.00
Galvanized inside and out Ea.	2.50	2.75	3.25	3.25	4.00	3 75	4.50	5 2
Blue Enameled inside and out Ea. Agate Enam. (gray) inside and out Ea.	$\frac{3.50}{4.50}$	5.00	5.50	4.50	5.50	5.25	6.25	7.2
Crystal Enam. (lgt. gray) in, and out. Ea.	4.75	5.25	5.75	5.75	6.75	6.50	7.50	8 50
White Enameled (blue outside) Ea.	5.25	5.75	6.50	6.50	7.50	7.25	8.25	9.2

Flug strainers will be supplied with sinks when ordered.

For sinks with couplings threaded for 1½ inch iron pipe, add 20 cents.

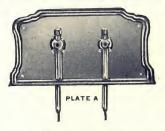
### WITH IMPROVED BRASS STRAINER COUPLING FOR LEAD OR IRON PIPE.

No		10	15	20	25	30	40	50	60
Width Length Depth	ln.	24	18 24 6	18 30 6	20 20 6	18 36 6	20 30 6	20 36 6	20 40 6
Plain. Painted inside and out Galvanized inside and out Blue Enameled inside and out	Ea.	$\frac{3.00}{3.50}$	$\frac{3.25}{3.75}$	$\frac{3.50}{4.25}$	$\frac{3.50}{4.25}$	$\frac{4.25}{5.00}$	$\frac{4.00}{4.75}$	$\frac{4.75}{5.50}$	5.00 5.50 6.23

Coupling always sent for lead pipe unless otherwise ordered.

Brass plug strainer with rubber stopper will be furnished at same price as improved brass strainer.

# WROUGHT STEEL SINK BACKS. WITH AIR CHAMBER THREADED FOR 3-4 INCH BIBBS



Air Chambers are made of Malleable and Wrought Iron, covered with Ornamental White Metal, as illustrated above.

	H	Vith C Char	one A nbe <b>r</b>	ir	With Two Air Chamber			
No	4	5	7	9	8	10	20	30
WidthIn.	20	24	30	36	20	24	30	36
Plain.         Ea           Painted.         Ea           Galvanized.         Ea           Blue Enameled         Ea           Agate Enameled gray)         Ea           Crystal Enameled (light gray)         Ea           White Enameled         Ea	3.20 $3.60$ $3.80$ $4.00$ $4.20$	$   \begin{array}{r}     3.30 \\     3.80 \\     4.20 \\     4.30 \\     4.50 \\   \end{array} $	$   \begin{array}{r}     3.60 \\     4.10 \\     4.60 \\     4.70 \\     4.90 \\   \end{array} $	4.00 $4.50$ $5.20$ $5.30$ $5.50$	5.20 $5.60$ $5.80$ $6.00$ $6.20$	5.30 5.80 6.20 6.30 6.50	5.60 6.10 6.60 6.70 6.90	6.00 $6.50$ $7.20$ $7.30$ $7.50$

Nickel-plated air chambers, list 60 cents extra each.

# WROUGHT STEEL BACKS.



PLATE E

No	. 0	1	2	3
Width,Ir	. 20	24	30	36
PlainEa		1.10	1.25	1 40
Painted Ea		1.30	1.60	2.00
Galvanized		1.80	2.10	2.50
Blue Enameled		2.20	2.60	3.20
Agate Enameled (gray)Ea		2.30	2.70	3.30
Crystal Enameled (light gray)Ea	2.20	2.50	2.90	3.50
White EnameledEa	2.50	3.00	3.50	4.25

Backs with two holes always supplied unless ordered with one.

# CAST IRON SQUARE KITCHEN SINKS.



PLATE A

Length, Inches	Width, Inches	Depth, Inches	Plain	Galvanized	Enameled	Lentgth. Inches	Width, Inches	Depth, Inches	Plain	Galvanized	Enameled
16 16 18 18 18	12 16 12 16 18	6 6 6 6 6	1.10 1.60 1.25 1.60 1.80	2.30 3.25 2.60 3.50 3.80	2.25 2.65 2.40	30 30 30 30 30 30 32	12 16 18 20 18	6 6 6 6 6	2.00 2.25 2.50 3.00 3.00	$ \begin{array}{r} 4.25 \\ 4.75 \\ 5.10 \\ 6.25 \\ 6.25 \end{array} $	3.90 4.25 4.50 4.65
20 20 20 20 22 22	12 14 16 20 14	6 6 6 6	1.50 1.50 1.60 1.95 1.60	3.10 3.20 3.50 4.20 3.30	2.65 3.00 3.15	32 34 36 36 36	21 20 16 18 20	6 6 6 6	3.40 3.00 2.75 3.00 3.70	7.20 6.50 6.15 6.50 7.75	4.75 5.25
23 24 24 24 24 24	15 14 15 16 17	6 6 6 6	1.70 1.70 1.75 1.80 1.95	3.40 3.75 3.90 4.00 4.20	3.15 3.15 3.25	36 36 38 38 40	21 22 19 20 20	6 6 6 6	3.70 3.70 3.80 3.80 4.00	7.75 7.75 8.00 8.00 8.75	5.50 5.50 5.75
$24 \\ 24 \\ 25 \\ 1/2 \\ 25 \\ 27$	$   \begin{array}{c}     18 \\     20 \\     15 \frac{1}{2} \\     17 \\     15   \end{array} $	6 6 6 6	2.10 2.40 1.75 2.10 2.00	4.30 5.00 3.60 4.30 4.25	3.50 3.75  3.65	41 42 42 42 42 48	22 18 20 22 20	6 6 6 6	4.25 $4.25$ $4.25$ $4.25$ $5.30$	9.00 9.00 9.00 9.00 11.50	6.00 6.25 6.75
28 28 28	16 17 20	6 6 6	2.10 $2.20$ $2.70$	$\begin{array}{c} 4.50 \\ 4.50 \\ 5.50 \end{array}$	3.75 3.75 4.00	48 48 48	22 23 24	6 6 6	$5.75 \\ 5.75 \\ 5.75$	$12.25 \\ 12.25 \\ 12.25$	7.50 7.75



# IRON SINK TRAPS. FOR IRON OR LEAD PIPE CONNECTIONS.

Half "S"Each,	1.25
Three-quarter "S" Each,	1.25
Full "S" Each.	1.25



### SINK BOLTS.

				 	-		
Iron			 	 		. Per Dozen	, .40
Brass			 	 		. Per Dozen	1.00
Brass, Nicl	kel-plat	ed	 	 		. Per Dozen	1.25

# SINK STRAINERS.



Painted													Per	Dozen,	1.50
Galvanized										 		 	Per	Dozen,	2.60
Enameled												 	Per	Dozen,	3.00

# PLATE D

# SINK STRAINERS.

	Per Dozen,	
	Per Dozen,	
Enameled	Per Dozen,	6.00



# SINK COUPLINGS.

FOR LEAD PIPE.

PaintedPer Dozen,	1.50
GalvanizedPer Dozen,	2.00



# SINK COUPLINGS.

Painted	 ozen, 9.00
Galvanized	 ozen, 10.80



# ADJUSTABLE SINK BRACKETS.

SUITABLE FOR ALL SIZE STEEL SINKS.

	·	Plain	Gal- vanized
No. 1.	For sinks up to 14 in. wide	.75	1.00
No. 2.	For sinks up to 18 in. wide		1.25
No. 3.	For sinks up to 24 in. wide		2.00

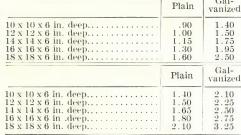


### HYDRANT CESS-POOLS.

Gal-



PLATE A



All have 2- in, bottom outlets.



PLATE B
WITH BELL TRAP.

# LARGE CESS-POOLS.



PLATE C

	Painted	Gal- vanized
12 x 12 x 10 in. deep	3.75	7.50
12 x 15 x 10 in. deep	4.00	8.00
15 x 15 x 10 in. deep		9.00
16 x 16 x 10 in. deep		10.10
18 x 18 x 10 in. deep	10.00	20.00

### PLAIN CESS-POOLS.



PLATE D

							***************************************	Stand- ard		Extra Heavy	All Brass Polished Top with Raised Rim
6	X	6	in.,	2-in.	out	let		.75		1.25	
9	X	9	in.,	3-in.	out	let		1.00		1.50	
91	2 X	91	ź in.,	4-in.	out	let		1.25		2.00	
10	X			4-in.				1.50		2.75	8.50
12	X	12		4-in.				2.00		3.25	10.00
13	X	13		4-in.						3.75	10.00
14	X							2.75	1	4.00	
All	bra	ass	polisl	ied t	op (	5 x 6	in.	, with	2 in		t 4 . 00



# BELL TRAP CESS-POOLS.



PLATE E

		ard	Extra Heavy
6 x 6	in., 2-in. outlet	1.00	1.50
8 x 8	in., 3-in. outlet	1.25	1.75
9 x 9	in., 3-in. outlet		1.85
10 × 10	in., 4-in. outletin., 4-in. outlet	1.60	2.25
12 x 12	in., 4-in. outlet	$\frac{2.00}{2.50}$	$\frac{3.00}{3.50}$
	in., 4-in. outlet	$\frac{2.50}{3.00}$	$\frac{3.50}{4.25}$
13 x 13	in., 5-in. outlet	3.50	4.75

# SOAPSTONE LAUNDRY TRAYS.



PLATE A

# CEMENT LAUNDRY TRAYS.

WITH PATENT METALLIC CASING AND TWIN WASTE CONNECTIONS.



PLATE B

PRICES ON APPLICATION.

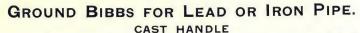




PLATE A LEAD PIPE



IRON PIPE, WITH SHOULDER



PLATE C IRON PIPE, S. O. T.



PLATE D IRON PIPE, S. O. T. FOR HOSE



PLATE E
IRON PIPE, WITH SHOULDER
FOR HOSE



PLATE F SCREWED, FOR WOOD

		PLAT	E A	OR	В				
SizeInches	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2
Rough	$20.40 \\ 24.60$	$\frac{21.60}{25.80}$	$\frac{22.80}{27.00}$	$30.60 \\ 35.40$	$\frac{36.60}{42.60}$	$\frac{51}{60.00}$	$82.20 \\ 94.20$	$\begin{vmatrix} 123.00 \\ 141.00 \end{vmatrix}$	$210.00 \\ 234.00$
		F	PLATE	E C					

PLATE C												
SizeInches	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 ½	2			
Rough Per doz. Finished Per doz. Nickel-Plated. Per doz.	22.20	23.40	24.60	33.60	40.80	57.00	91.20	135.00	234.00			

Finished Per doz. Nickel-Plated Per doz.	22.20	23.40	24.60	33.60	40.80	57.00	91.20	135.00	234.00					
			PLAT	E D										
SizeInches 4 3/8 1/2 5/8 3/4 1 1 1 1/4 1 1/2 2														
Rough Per doz. Finished Per doz. Nickel-Plated . Per doz.		25.80	27.00	36.00	43.20	63.00	100.20	147.00	252.00					
			PLAT	EE										
Size	Size													
Rough Per doz. Finished Per doz. Nickel-Plated . Per doz.		24.00	25.20	33.00	39.00	57.00	91.20	135.00	228.00					
PLATE F														
Size Inches	1/4	3/8	1/2	5/8	34	1	1 1/4	1 1/2	2					

# LEVER HANDLE STOPS AND STOP AND WASTES.



FOR IRON PIPE



LPUIL W											
STOP,	NUT	AND	WASHER								
-											

	4
PLATE A	PLATE B

Sizes	Inches	1/4	3/8	1/2	5/8	34	1
Rough Stop. Per Finished Stop. Per Nickel-Plated Stop. Per	dozen	20.40	21.60	22.80	30.60	36.60	51.00
Sizes	Inches	1 1/4	1 1/2	2	2 1/2	3	
Rough StopPer	dozen	70.20	105.00	186.00	288.00	402.00	

### PLATE B

	PLAI	E D					
Sizes	Inches	1/4	3/8	1/2	5/8	34	1
Rough Stop and WastePer Finished Stop and WastePer Nickel-Plated Stop and WastePer	dozen	21.00	22 20	23 40	31 20	37 20	52 20
Sizes							
Rough Stop and WastePer	dozen	72.00	108.00	192.00	300.00	420.00	

### FOR LEAD AND IRON PIPE





PLATE C
LEAD AND IRON PIPE STOP

PLATE C NUT AND WASHER

NUT AND WASHER	NUT AND WASHER						
Sizes	Inches	1/4	3/8	1/2	5/8	3/4	1
Rough Stop	. Per dozen . Per dozen	$16.20 \\ 20.40$	17.40 21.60	18.60 22.80	$25.80 \\ 30.60$	30.60 36.60	$\frac{42.00}{51.00}$
Sizes					2 1/2		
Rough Stop	Per dozen	70.20	105.00	186.00	288.00	402.00	
	PLAT	E D					
Sizes	Inches	1/4	3/8	1/2	5/8	3/4	1

	PLAI	E U					
Sizes	. Inches	1/4	3/8	1/2	5/8	3/4	1
Rough Stop and WastePe Finished Stop and WastePe	er dozen er dozen	16.80 21.00	18.00 22.20	19.20 23.40	$\frac{26.40}{31.20}$	31.20 37.20	43.20
Sizes	. Inches	1 1/4	1 1/2	2	2 1/2	3	
Rough Stop and WastePe	er dozen	72.00	108.00	192.00	300.00	420.00	

# T HANDLE ROUGH STOPS AND STOP AND WASTES.

FOR LEAD PIPE



PLATE A STOP, NUT AND WASHER



PLATE B STOP AND WASTE, NUT AND WASHER

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SizesInches	14	3,8	1,2	5/8	34	1
Rough StopPer dozen	16.20	17.40	18.60	25.80	30.60	42.00
SizesInches	11/4	1 1/2	2	$2\frac{1}{2}$	3	
Rough StopPer dozen	70.20	105.00	186.00	288.00	402.00	

#### PLATE B

Sizes	Inches	14	3/8	1/2	5/8	3/4	1
Rough Stop and WastePer	dozen	16.80	18.00	19.20	26.40	31.20	43.20
Sizes	Inches	1 1/4	1 1 2	2	2 1/2		
Rough Stop and WastePer	dozen	72.00	108.00	192.00	300.00	420.00	



PLATE C ROUND-WAY STOP



PLATE D
ROUND-WAY STOP AND WASTE

#### PLATE C

SizesInches	14	3.8	1/2	58	34
Rough StopPer dozen	19.80	21.60	23.40	31.20	39.60
Sizes Inches	1	11/4	1 1/2	2	
Rough Stop Per dozen	60.00	97.20	141.00	252.00	

#### PLATE D

Sizes Inches	14	3.8	1 ½	5 8	34
Rough and Stop WastePer dozen	20.40	22.20	24.00	31.80	40.20
SizesInches	1	1 1/4	1 1/2	2	
Rough and Stop Waste Per dozen	61.20	99.00	144.00	258.00	

## T HANDLE STOPS AND STOP AND WASTE. FOR LEAD AND IRON PIPE







PLATE B STOP, STOP AND WASTE ROUND-WAY, STOP, ROUND-WAY, STOP NUT AND WASHER NUT AND WASHER AND WASTE, NUT AND



PLATE C



PLATE D

	PLAT	E A				WASHE	3
Sizes	Inches	14	3 s	1/2	28	34	1
Rough Stop	. Per dozen	16.20	17.40	18.60	25.80	30.60	42.00
Sizes	Inches	134	1 1/2	2	$2^{1}{}_2^{2}$	3	
Rough Stop	. Per dozen	70.20	105.00	186.00	288.00	402.00	
Sizes			3.8	12	5 8	34	1
Finished Stop	. Per dozen	20.40	21.60	22.80	30.60	36.60	51.00
	PLATI	Е В					
Sizes	Inches	14	3/8	1/2	5 8	34	1
Rough Stop and Waste	. Per dozen	16.80	18.00	19.20	26.40	31.20	43.20
Sizes	Inches	1 14	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	
Rough Stop and Waste	. Per dozen	72.00	108.00	192.00	300.00	420.00	
Sizes	Inches	1/4	3/8	1/2	58	34	1
Finished Stop and Waste	. Per dozen	21.00	22.20	23.40	31.20	37.20	52.20
	PLAT	E C					
Sizes	.Inches 1	2 5	8 34	1	1 1/4	1 1/2	2
Rough Stop. Pe Finished Stop. Pe	r dozen 23 . r dozen 27 .	40 31. 60 36.	20 39.6 00 45.6	0 60.00 0 69.00	97.20	141.00	252.00
	PLAT	E D					
Sizes	.Inches 1	2 5	8 34	1	1 1/4	1 1/2	2
Rough Stop and WastePe Finished Stop and WastePe	r dozen 24. r dozen 28.	00 31. 20 36.	80 40 . 2 60 46 . 2	20 61 . 20 20 70 . 20	99.00	144.00	258.00
Sizes	I1	iches	1/4	3 8 1	2 58	3/4	1
Add for Coarse Thread for Wo Lead End, Rough	ood on Per o	lozen	1.80 1	.80 1.	80 3.00	0 4.20	6.00
Sizes	I	nches	11/4   :	1/2   1	2   21/2	á   3	



# T HANDLE STOPS AND STOP AND WASTE.

FOR IRON PIPE. NUT AND WASHER.



PLATE A IRON PIPE STOP



PLATE B IRON PIPE STOP, AND WASTE



PLATE C ROUND-WAY, IRON PIPE STOP



PLATE D
ROUND-WAY, IRON
PIPE, STOP AND WASTE

### PLATE A

SizesInches	1/4	3/8	$\frac{1}{2}$	5.8	3 4	1
Rough Stop. Per dozen Finished Stop. Per dozen Nickel-Plated Stop. Per dozen	20.40	21.60	22.80	30.60	36.60	51 00
SizesInche	s 1 1/4	1 1 3	2	2	2 1/2	3
Rough Stop Per doze	n 70.2	0 105.	00 186	. 00 28	88.00	102.00

### PLATE B

Sizes	Inches	14	3.8	1/2	2.8	34	1
Rough Stop and Waste	dozen	21.00	22.20	23.40	31.20	37 20	59. 90
Sizes	. Inche	es 1 1/4	1 1 1	2	2	21/2	3
Rough Stop and Waste Pe	r doze	n 72.0	00 108.	00 19:	2.00 30	00.00	120.00

### PLATE C

Sizes	Inches	$\frac{1}{2}$	5 8	34	1	134	1.16	2
Rough Stop. Finished Stop. Nickel-Plated Stop.	Per dozen	27 60	36 00	45 60	60 00			

#### PLATE D

SizesInches	1/2	58	34	1	11/4	1 ½	2
Rough Stop and WastePer dozen	24.00	31.80	40.20	61.20	99.00	144.00	258.00
Finished Stop and Waste. Per dozen Nickel-Plated stop and waste. Per doz.	$\frac{28.20}{32.40}$	$36.60 \\ 41.40$	$\frac{46.20}{52.20}$	$70.20 \\ 79.20$			

## ROUGH STOPS AND STOP AND WASTES. MALE AND FEMALE IRON PIPE.

LEVER HANDLE







STOP AND WASTE, NUT AND WASHER

	Р	LATE A				
SizesInches	1/4	3 8	1/2	5 8	3.4	1
Rough Stop	19.80	21.00	22.20	30.60	35.40	48.00
SizesInches	1 1/4	1 1/2	2	$2\frac{1}{2}$	3	
Rough Stop	79.20	120.00	210.00	324.00	450.00	
	Р	LATE B	1			
SizesInches	1/4	3 8	1/2	5/8	34	1
Rough Stop and Waste	20.40	21.60	22.80	31.20	36.00	49.20
SizesInches	1 1/4	1 1/2	2	2 1/2	3	

### T HANDLE

216.00



Rough Stop and Waste.... 81.00 | 123.00



Sizes..... Inches 11/4



468.00

336.00

STOP AND WASTE, NUT AND WASHER

21/2

36.00 49.20

3

	PLATE	С			
1/4	3/8	1/2	5/8	3/4	1
19.80	21.00	22.20	30.60	35.40	48.00
1 1/4	1 1/2	2	2 1/2	3	
79.20	120.00	210.00	324.00	450.00	
	PLATE	D			
1/4	3 8	1/2	5/8	34	1
	19.80 11/4 79.20	½         ¾           19.80         21.00           1¼         1½           79.20         120.00           PLATE	19.80 21.00 22.20 134 132 2 79.20 120.00 210.00 PLATE D	¼         ¾         ½         ½           19.80         21.00         22.20         30.60           1¼         1½         2         2½           79.20         120.00         210.00         324.00           PLATE D	½         ¾         ½         ½         ¾           19.80         21.00         22.20         30.60         35.40           1¼         1½         2         2½         3           79.20         120.00         210.00         324.00         450.00           PLATE D

116 Rough Stop and Waste.... 81.00 | 123.00 | 216.00 | 336.00 | 468.00

Rough Stop and Waste.... 20.40 21.60 22.80 31.20



# LEVER HANDLE STOPS AND STOP AND WASTE.

FOR LEAD AND IRON PIPE. NUT AND WASHER.



PLATE A ROUND-WAY, STOP



PLATE B
ROUND-WAY, STOP AND WASTE

	LAIL	- A					
Sizes	1/2	5 8	34	1	1.14	1 12	2
Rough Stop Per Doz. Finished Stop Per Doz.	$\frac{23.40}{27.60}$	31.20 36.00	39.60 45.60	60.00 69.00	97.20	141.00	252.00
•	PL	ATE E	3				
SizesInches	1/2	58	34	1	1 14	1 1 2	2
Rough Stop and Waste. Per Doz. Fin'd Stop and Waste Per Doz.	$\frac{24.00}{28.20}$	31.80 36.60		61.20 70.20	99.00	144.00	258.00
SizesI	nches	1/4	3 %	1/2		34	1
Add for coarse thread for wood or end, roughPet		1.80	1.80	1.80	3.00	4.20	6.00
SizesI	nches	-1.14	1 1 2	2	216	3	
Add for coarse thread for wood or end, roughPel		9.00	12.00	24.00	36.00	51.50	

# ROUGH STOPS AND STOP AND WASTE. NUT AND WASHER



PLATE C
LEAD AND MALE IRON PIPE STOP-



LEAD AND MALE IRON PIPE STOP AND WASTE

					PLAT	EC					
Sizes	14	3 8	1.2	5 s	34	1	1 34	112	2	$2^{+}2^{-}$	3
Rough St.	19.80	21.00	22.20	30.60	35.40	48.00	79.20	120.00	210.00	324.00	450.00
					PLAT	E D					
Sizes	14	3/8	12	5 8	34	1	11/4	1 1/2	2	212	3
Rough S'p and Waste	20.40	21.60	22.80	31.20	36.00	49.20	81.00	123.00	216.00	336.00	468.00

T handle, same price. Both ends male, iron pipe, same price.

# ROUND-WAY STOPS AND STOP AND WASTE.

NUT AND WASHER



PLATE A
LEVER HANDLE STOP
BOTH ENDS IRON PIPE



PLATE B

LEVER HANDLE STOP AND WASTE,

BOTH ENDS IRON PIPE

### PLATE A

Sizes	Inches	1 2	5 s	34	1	1 14	1 1 2	2
Rough Stop	Per Doz.	23,40	31.20	39.60	60.00	97.20	141.00	252.00
		PL	ATE E	3				
Sizes	Inches	12	5 8	34	1	1 14	1 1 2	2

Rough Stop and Waste, Per Doz. 24.00 31.80 40.20 61.20 99.00 144.00 258.00



PLATE C LEVER HANDLE STOP BOTH ENDS IRON PIPE



PLATE D

LEVER HANDLE STOP AND WASTE

BOTH ENDS IRON PIPE

#### PLATE C

SizesInches	3 <sub>S</sub>	1 2	5 s	34
Finished Stop	25.80	27.60	36.00	45,60
	30.00	31.80	40.80	51.60
SizesInches	1	134	1.12	2
Finished Stop. Per Doz.	69.00	$109.20 \\ 121.20$	159.00	276.00
Nickel-Plated Stop. Per Doz.	78.00		177.00	300.00

		PLATE
-	-	Luch

Sizes Inches	3 8	1.2	5 ×	34
Finished Stop and Waste Per Doz. Nickel-Plated Stop and Waste Per Doz.	26.40 30.60	28.20 32.40	36.60 41.40	$\frac{46.20}{52.20}$
SizesInches	1	11/4	1 1/2	2
Finished Stop and Waste Per Doz. Nickel-plated Stop and Waste Per Doz.	70.20 79.20	111.00 123.00	162.00 180.00	282.00 306.00

# C.J. Rainear. 2. Co. 3



### COMPRESSION BIBBS



PLATE A

PLATE A OR B

IRON PIPE WITH SHOULDER

Sizes Inches	1/4	3 8	1/2	58	34	1	1 1/4	1 1/2   2
RoughPer Doz. FinishedPer Doz.								
Nickel-PlatedPer Doz.								

With fine thread, same list as above.



PLATE C LEAD PIPE FOR HOSE



PLATE D
IRON PIPE, WITH SHOULDER, FOR HOSE

	FLA	IL C	On	0				
SizesInches	3 8	12	5 8	34	1	1 1/4	1 1/2	2
RoughPer Doz.								
Finished Per Doz.								
Nickel-Plated Per Doz.	19.20	19.80	25.80	32.40	58.80	108.00	144.00	282.00

With fine thread, same list as above,



PLATE E IRON PIPE S. O. T.

PLATE E OR F



PLATE F SCREWED FOR WOOD

SizesInches	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2
RoughPer Doz. FinishedPer Doz. Nickel-PlatedPer Doz.	15.00	15.60	16.20	23.40	30.60	54.00	99.00	132.00	264.00

With fine thread, same list as above.

Sizes	Inche	s 1/4	3/8	1/2	5.8	34	1	1 1/4	1 1/2	2
Add for Hose End	Per Doz		2.40	$\frac{-}{2.40}$	$\frac{-}{2.40}$	$\frac{-}{2.40}$	6.00	9.00	12.00	18.00
Sizes						Inche	S   3	8 1	2   5/8	34
Pittsburgh or Other Specia	l Gauge	Hose	Bibb	s, add	Pe	r Doz	. 1.	80 1.	80 1.8	1.80
SizesInches	8 1/4	3/8	1/2	5/8	3,4		1	11/4	1 1/2	2
Add for Stuffing-Box										

## COMPRESSION BIBBS







PLATE B
IRON PIPE WITH FLANGE, O. S.
THREAD, FOR HOSE



PLATE C LEAD PIPE, FLANGE AND THIMBLE

P	LATE A	1			
Sizes Inches	3/8	1/2	5 8	34	1
Finished Per Doz. Nickel-Plated Per Doz.	18.60 21.60	19.20 22.20	$\frac{26.40}{29.40}$	$\frac{33.60}{37.20}$	58.80 63.60
	LATE E	3			
SizesInches	3/8	1/2	5/8	3/4	11
Finished	21.00 24.00	21.60 24.60	$\frac{28.80}{31.80}$	36.00 39.60	64.80 69.60
F	LATE	С			
SizesInches	3/8	1/2	5/8	34	1
Finished Per Doz. Nickel-Plated Per Doz.	21.00 24.00	21.60 24.60	29.40 32.40	37.20 40.80	64.20 69.00



PLATE D
IRON PIPE, FLANGE AND
THIMBLE



PLATE E
IRON PIPE, WITH FLANGE
I. S. THREAD,



PLATE F
IRON PIPE WITH FLANGE.
O. S. THREAD FOR HOSE

PLATE D					
SizesInches	3/8	1/2	5/8	34	1
Finished Per Doz. Nickel-Plated Per Doz. Add for Hexagon in Front of Flange Per Doz. Add for Hose End Per Doz. Pittsburgh or Other Special Gauge Hose Bibbs, add Per Doz.	22.80 25.80 2.40 2.40	23.40 $26.40$ $2.40$ $2.40$	$32.40 \\ 35.40 \\ 2.40 \\ 2.40$	$\begin{array}{r} 41.40 \\ 45.00 \\ 2.40 \\ 2.40 \end{array}$	$70.20 \\ 75.00 \\ 4.20 \\ 6.00$
add	$\frac{1.80}{2.40}$	$\frac{1.80}{3.00}$	$\frac{1.80}{3.60}$	$\frac{1.80}{4.80}$	9.00

P	LATE I				
SizesInches	3/8	1/2	5/8	34	1
Finished Per Doz. Nickel-Plated Per Doz.	18.60 21.60	19.20 22.20	26.40 29.40	33.60 37.20	$58.80 \\ 63.60$
P	LATE	=			
SizesInches	3/8	1/2	5/8	3/4	1
	21.00 24.00	21.60 24.60	28.80 31.80	36.00 39.60	64.80 69.60

# COMPRESSION STOPS AND STOP AND WASTES.



PLATE A STOP, LEAD AND IRON PIPE



PLATE B STOP, LEAD PIPE

#### PLATE A OR E

	- A ON	0			
Sizes Inche		3 %	1.2	5 8	3,4
Rough         Per Do           Finished         Per Do           Nickel-Plated         Per Do           Add for Male End, Plate A         Per Do           Sizes         Inche	z. 12.00 z. 15.00 z. 2.40	12.00 12.60 15.60 2.40	14.40 15.00 18.00 2.40	$19.80 \\ 21.00 \\ 24.00 \\ 2.40$	26.40 27.60 31.20 2.40
		1 14	$1^{-1}\frac{1}{2}$	2	
Rough Per Doz Finished Per Doz Nickel-Plated Per Doz Add for Male End Plate A Per Doz	. 48.00	87.00 90.00 99.00 6.00	114.00 120.00 132.00 9.00	240.00 264.00	



STOP, BOTH ENDS IRON PIPE



STOP AND WASTE, BOTH ENDS IRON PIPE

### PLATE C

Sizes Inches	14	3.5	1/2	5/8	3,
Rough. Per Doz. Finished Per Doz. Nickel-Plated. Per Doz. Add Each Male En I. Per Doz.	$12.00 \\ 15.00 \\ 2.40$	12.00 12.60 15.60 2.40	14.40 15.00 18.00 2.40	19.80 21.00 24.00 2.40	$ \begin{array}{r}                                     $
Sizes         Inches           Rough         Per Doz.           Finished         Per Doz.           Nickel-Plated         Per Doz.           Add Each Male End         Per Doz.	$ \begin{array}{r} 1 \\  \hline  45.00 \\  48.00 \\  52.80 \\  4.20 \end{array} $	87.00 90.00 99.00 6.00	$ \begin{array}{r} 1\frac{1}{2} \\ \hline 114.00 \\ 120.00 \\ 132.00 \\ 9.00 \end{array} $	$240.00 \\ 264.00$	
SizesInches $\frac{14}{4}$ $\frac{34}{8}$ Add for Stuffing-Box $\frac{2.40}{2.40}$ $\frac{2.40}{2.40}$	$\frac{1/2}{3.00} = \frac{5}{3.6}$	$\begin{vmatrix} \frac{3}{4} \\ \frac{3}{60} \end{vmatrix} = \begin{vmatrix} \frac{3}{4} \\ \frac{4}{80} \end{vmatrix}$	$\frac{1}{9.00} \begin{vmatrix} 1 \\ 15 \end{vmatrix}$	1/ 1 1 1	~ i 9

#### PLATE D

SizesInches		1 2	5 8	34	1
Rough, Stuffing-Box included. Per Doz.	$\frac{23.40}{26.40}$	23.40	28.80	36.00	57.00
Finished, Stuffing-Box included Per Doz.		24.00	30.00	37.20	60.00
Nickel-Plated, Stuffing-Box incl. Per Doz.		27.00	33.00	40.80	64.80
Add for Wheel Handle. Per Doz.		4.20	4.80	5.40	9.00
Add for Slip Joint, either end. Per Doz.		3.00	3.60	4.80	7.20

# FLAT-WAY PATENT GUARD OR CAP STOPS AND STOP AND WASTE COCKS.

RIGHT OR LEFT HAND, T OR LEVER HANDLE OR SOCKET.

NUT AND WASHER.



PLATE A IRON PIPE STOP.



PLATE B
LEAD AND IRON PIPE STOP.



PLATE C LEAD PIPE STOP.

### PLATE A, B OR C

Size Inches	3 s	1.2	5.8	34	1	1.14	1 1 2	2
Rough Stop Per Dozen Finished Stop Per Dozen								
Nickel-plated StopPer Dozen								



PLATE D
IRON PIPE
STOP AND WASTE



PLATE E
LEAD AND IRON PIPE
STOP AND WASTE.



PLATE F
LEAD PIPE
STOP AND WASTE.

### PLATE D, E OR F

SizeInches	3 8	1 2	5 s	34	1	11/4	1 1/2	2
Rough Stop and WasteDozen Finished Stop and WasteDozen N. P. Stop and WasteDozen	22.20	23.40	31.20	37.20	52.20	84.00	126.00	216.00



# ROUND-WAY PATENT GUARD OR CAP STOPS AND STOP AND WASTES.

RIGHT OR LEFT HAND, T OR LEVER HANDLE OR SOCKET.

NUT AND WASHER.



IRON PIPE STOP.



PLATE B

LEAD AND IRON PIPE STOP.



PLATE C LEAD PIPE STOP.

### PLATE A, B OR C

			_		-		
SizeInches	12	5 8	34	1	1 1/4	115	9
Rough Stop. Per Dozen Finished Stop Per Dozen Nickel-plated Stop Per Dozen	23.40	31.20	39.60	60.00	97.20	141.00	252.00



PLATE D IRON PIPE STOP AND WASTE.



PLATE E

LEAD AND IRON PIPE

STOP AND WASTE.



PLATE F LEAD PIPE STOP AND WASTE.

### PLATE D, E OR F

	1	1	1				
Size	04 00						258.00
Finished Stop and Waste. Per Dozen NP. Stop and Waste. Per Dozen	28.20 32.40	36.60 41.40	$\frac{46.20}{52.20}$	70.20 79.20	111.00 123.00	162.00 180.00	282.00 306.00

### COMPRESSION SILL COCKS.



PLATE A



PLATE E



PLATE (



LATE D

### PLATE A

Size $^{1}2$ or $^{3}4$ inch	Finished	Nickel-Plated
T Handle with Shoulder Wheel Handle with Shoulder Loose Key with Shoulder	20.40 $25.80$ $30.60$	24.00 29.40 34.20

### PLATE B

Size 1 <sub>2</sub> or 3 <sub>4</sub> inch	Finished	Nickel-Plated
T Handle with Flange Wheel Handle with Flange. Loose Key with Flange	30.00	28.20 33.60 38.40

### PLATE C

70	Size $^{+}2$ or $^{3}4$ inch	 Finished	Nickel-Plated
Wheel Har	vith Flauge idle with Flauge with Flauge	24.60 30.00 34.80	28.20 33.60 38.40

### PLATE D

Size 12 or	34 inch	Finished	Nickel-Plated
T Handle with Flange Wheel Handle with Flange. Loose Key with Flange		26.40 31.80 36.60	30.00 35.40 40.20

One key furnished with each loose key pattern cock.





### COMPRESSION BASIN COCKS.



PLATE A
Finished or Nickel-Plated

THE WAY OF TAKEN PARTY		
T Handle. Per	Dozen.	18 00
Cross Handle	Dozen.	19 00
Add for Stuffing BoxPer	Dozen,	3.00

PLATE B

Finished or Nickel-Plated

T HandlePer	Dozen.	21.00
Cross Handle Per	Dozen	22 80
Add for Stuffing BoxPer	Dozen,	3.00



Finished or Nickel-Plated

T HandlePer	Dozen	22 80
Cross Handle	Dozen	94 - 60
Add for Stuffing Box	Dozen,	3.00



No. 9



PLATE D

T Handle ..

Cross Handle...

PLATE D

Finished or Nickel-Plated



Per Dozen, 30.00 Per Dozen, 31.80

PLATE E		
With China Scalp Handle Per Add for China Scalp Handles to T Handle List Per Add for Stuffing Box Per	Dozon	19 00



### COMPRESSION Cocks.

COMPRESSION PANTRY COCKS.





### PLATE B

### COMPRESSION DOUBLE BATH COCKS.



PLATE C WITH CHINA SCALP HANDLES.

### PLATE A

T Handle, Finished or N. P. Doz.,	36.00
Cross Handle, Finished or	
N. P	37.80
Add for Hose End Doz.,	3.00
Add for Stuffing Box Doz.,	3.00

### PLATE B

Cross Handle, Fin. or N. P., Each,	10,00
Add for Hose End Each,	. 25
Add for Stuffing Box Each,	. 50
Add for China Scalp HandlesDoz.,	12.00

Finished or N. P. 16 in, size,

3 % in. Center to Center. . Each, Finished or N. P. 16 in. size,

41/4 in. Center to Center. Each, 6.95

Add for Jewel Cup..... Each, .60

Add for 5 s-in, Couplings . . . Each, .60

### COMPRESSION DOUBLE BATH COCKS





### FULLER BIBBS.



PLATE A LEAD PIPE



PLATE B LEAD PIPE, FOR HOSE

	PL	AIL A			
Sizes	Inches	1 2	5 ×	34	1
Finished Per Nickel-Plated Per	Dozen Dozen	21.00 25.20	27.00 31.20	36.00 42.00	72.00 80.40

PLATE B					
SizesInches	1/2	5 8	34	1	
Finished	25.20 29.40	31.20 35.40	40.20 46.20	80.40 88.80	



PLATE C IRON PIPE, WITH SHOULDER



PLATE D
IRON PIPE, WITH SHOULDER, FOR HOSE

PLATE C						
SizesInches	1/2	5 8	34	1		
Finished		27.00 31.20	35.00 42.00	72.00 80.40		

	PLAT	TE D			
Sizes	Inches	1/2	5 8	34	1
FinishedPer Nickel-PlatedPer		25.20 29.40	31.20 35.40	40.20 46.20	80.40 88.80



PLATE E
SINK BIBBS, IRON PIPE, WITH SHOULDER

	34 In.
Finished	50.40
Nickel-Plated	56.40
If with Flange Nut and Thimble, add	20.00
Finished, with Flange, Long Thimble and Lock Nut Per Dozen,	81.00
Nickel-Plated, with Flange, Long Thimble and Lock Nut Per Dozen,	88.80

### CJ. Dainear. 2. Co. 3



### FULLER BIBBS.

FOR IRON PIPE SOLID FLANGE.



PLATE A IRON PIPE, O. S. THREAD PLATE B IRON PIPE, I. S. THREAD

	PLATE	AORI	В		
Sizes	Inches	12	5 8	34	1
FinishedNickel-Plated		28.80 34.80	36.60 42.60	47.40 55.20	89.40 99.60



PLATE C IRON PIPE, O. S. THREAD FOR HOSE



PLATE D
IRON PIPE, I. S. THREAD FOR HOSE

PLATE	COR	D		
SizesInches	12	5 8	3.4	1
Finished. Per Dozer Nickel-Plated. Per Dozer		40.80 46.80	51.60 59.40	97.80 108.00
Add for Hexagon in Front of FlangePer Dozei	3.00	3.00	3.00	6.00



PLATE E
IRON PIPE, MALE END, BOX FLANGE



PLATE F
IRON PIPE, FEMALE, BOX FLANGE

PLATE E							
SizesInches	1/2	5 s	34	1			
Finished. Per Dozen Nickel-Plated. Per Dozen		39.60 45.60	50.40 58.20	88.80 99.00			

PLATE F							
Sizes	Inches	1.2	5 8	3.4	1		
Finished	Per Dozen	32.40 38.40 4.20	39.60 45.60 4.20	50.40 58.20 4.20	88.80 99.00 8.40		
Pittsburgh or other Special Gauge Hose Bibbs, add			1.20	1120	0.10		



### FULLER BASIN COCKS.

No. 0



PLATE A

No. 0 with-Union



PLATE I



PLATE C



PLATE D



PLATE E

No. 0.	PLATE A Finished or Nickel-Plated	39.00
	PLATE B	
No. 0.	With Union. Finished or Nickel-Plated	51.00
	PLATE C	
No. 1.	Finished or Nickel-Plated Per Dozen,	42.00
	PLATE D	
No. 2.	Finished or Nickel-Plated Per Dozen,	45.00
	PLATE E	
No. 3.	Finished or Nickel-Plated	51.00
Auu IUI	Ebony or Ivory Handles. Per Dozen, China Handles. Per Dozen,	$\frac{18.00}{19.80}$

### FULLER DOUBLE BATH COCKS.

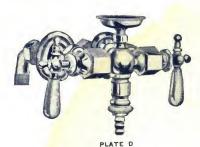


PLATE A

Nickel Plated	 Each,	12.00
If with Ebony or Ivory Handles, add		0 00



Finished or Nickel Plated.. Each, 4.50 | Finished or Nickel Plated.. Each, 4.35



WITH CHINA HANDLES-"HOT" AND "COLD."

- St. L. D. L. J. Daols	1.80
Finished or Nickel Plated, Each	7.5
For Gold-Lined Ring Cup, add	(0)
For Gold-Lined King Cup, add	



### DOHERTY SELF-CLOSING WORK







PLATE B
PLAIN BIBB, IRON PIPE, WITH SHOULDER.

PLATE A OR B

SizesInches	3 8	. 2	5 N	34	1
Finished Per Dozen Nickel-Plated. Per Dozen					



PLATE C
PLAIN BIBB, FLANGE
AND THIMBLE.



PLATE D
PLAIN BIBB, FLANGE NUT AND
BENT COUPLING.

PLATE C

SizesInches	3 <sub>S</sub>	12	5 8	34	1
Finished Per Doz. Nickel-Plated Per Doz.	35.40 41.40	36.00 42.00	43.80 49.80	56.40 64.20	88.20 98.40
	PLATE	D			
Sizes Inches	3 - 8	12	58	34	1
Finished		40.80 46.80	52.80 58.80	69.60 77.40	108.00

### LEVER HANDLE SELF-CLOSING STOP COCK.



PLATE E

SizesInches	1/2	5 8
Finished. Per Doz.	48.00	54.00
Nickel-Plated. Per Doz.	54.00	60.00

### DOHERTY SELF-CLOSING WORK.



PLATE A BASIN COCK.

Finished or Nickel-Plated,

Per Dozen.... 48.00



PLATE B PANTRY COCK.

Finished or Nickel-Plated	. Per Dozen, . Per Dozen,	
---------------------------	------------------------------	--

### URINAL COCKS.



PLATE C
FINISHED, NUT AND BENT COUPLING.



PLATE D LEAD PIPE.

Finished Per Doz.	36.00
Nickel-Plated, Per Doz.	
Finished with Flange and Thim-	
ble Per Doz.	44.40
Nickel-Plated with Flange and	
Thimble Per Doz.	50.40
Finished with Flange, Nut and	
Bent Coupling Per Doz.	50.40
Nickel-Plated with Flange, Nut	
and Bent CouplingPer Doz.	56.40

Iron pipe, same list.

### PLATE C

Finished with Flange, Nut and Bent Coupling	Per Doz.	68.40
Nickel-Piated	Per Doz.	77.40
If with Adjustable Acorn Top, Flange and Thimble only, deduct	Per Doz.	6.00



### CROWN HANDLE WORK.

"CROWN" HANDLE SELF-CLOSING BASIN COCK

Nickel-plated

Per Dozeu	60.00
Same with China Index, per Dozen	64.00



PLATE B

"CROWN" HANDLE SELF-CLOSING BIBB FOR IRON PIPE. MADE ALSO FOR LEAD PIPE

SizeInches	.1 2	5 s
Finished. Per Dozen Nickel-plated. Per Dozen For Hose End, Add. Per Dozen	40.00	37.00 43.00 4.00



PLATE C

"CROWN" HANDLE SELF-CLOSING BIBB FLANGE AND IRON PIPE MALE

Size	12	5 %
	41.00 47.00 2.00	44.00 50.00 2.00
For China Indexes, Add	Per	Dozen, 4.0



### BOSTON OR ZANE SELF-CLOSING WORK.

BIBBS



PLATE A LEAD PIPE.



PLATE B IRON PIPE, WITH SHOULDER.

### PLATE A OR B

Sizes Inches	3 8	12	5 <sub>8</sub>	34	1
Finished Per Doz. Nickel-Plated Per Doz.	24.60 30.60	$\frac{25.20}{31.20}$	$\frac{31.20}{37.20}$	$\frac{40.80}{48.60}$	67.20 77.40



PLATE C IRON PIPE, O. S. THREAD, SOLID FLANGE. LEAD PIPE, WITH FLANGE AND THIMBLE.



PLATE D

### PLATE C

Sizes Inches	3.8	1 2	5 8	34	1
Finished Per Doz. Nickel-Plated Per Doz.		30.00 36.00	37.20 43.20	$\frac{48.00}{55.80}$	$\frac{78.00}{88.20}$

### PLATE D

S zes	Inches	3/8	$\frac{1}{2}$	5 8	3.4	1
Finished				40 . 20 46 . 20	51.60 59.40	83.40 93.60

### BOSTON OR ZANE SELF-CLOSING WORK.



PLATE A STOP FOR LEAD PIPE.



PLATE B STOP FOR IRON PIPE.



PLATE C BASIN COCK, T HANDLE.

### PLATE A OR B

Sizes Inches	3 8	1/2	58	34	1
Finished Per Doz.	23.40	25.80	31.80	42.00	67.20
Nickel-Plated Per Doz.	29.40	31.80	37.80	49.80	77.40

Both ends male, iron pipe or lead and iron pipe, same list.

### PLATE C

### URINAL COCKS.



PLATE D



PLATE E FLANGE AND THIMBLE.

Finished...... Per Doz. 55.80

Nickel-Plated..... Per Doz. 64.80

Iron pipe, same list as Lead pipe.

Finished, without Adjustable Flange, Acorn Top and Union, deduct.Per Doz. 15.00 Nickel-plated, without Adjustable Flange, Acorn Top and Union, deduct,

Per Doz. 18.00

### TELEGRAPH SELF-CLOSING WORK.



### PLATE A

### BASIN COCK

### SMALL PATTERN

### LARGE PATTERN

Finished or Nickel-Plated...Doz. 27.00 Finished or Nickel-Plated...Doz. 33.00 Add for large tubes, 2.40



PLATE B

### PLAIN BIBBS, FOR LEAD PIPE

SizesInches	3 8	1/2	5.8	34	1
Finished Per Doz. Nickel-Plated Per Doz. For Hose End Bibbs, add Per Doz.	25.80	20 . 40 26 . 40 4 . 20	26.40 32.40 4.20	$   \begin{array}{r}     34.80 \\     42.60 \\     4.20   \end{array} $	60.00 72.00 8.40

### WITH FLANGE AND THIMBLE, PLAIN

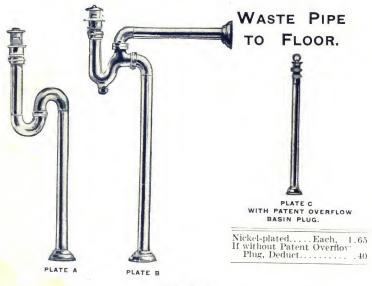
Sizesinches	3 .	14	5.4	34	1
Finished Per Doz. Nickel-Plated Per Doz.	27.00	27.60	35.40 41.40	45.60 53.40	76.20 86.40

### WITH FLANGE AND THIMBLE, FOR HOSE

SizesIncl	ies 3 s	1 2	5 %	34	1
Finished Per D Nickel-Plated Per D Without Thimbles, deduct Per D	oz. 37.20	$\frac{31.80}{37.80}$ $\frac{2.40}{2.40}$	39.60 45.60 3.60	57.60	



### LAVATORY TRAPS.



### PLATE A

1 4-inch "S" Economy Lavatory Trap, Plain, Complete with Pipe to Floor, and Flange. Each, 3.09

### PLATE B

1 4-inch "S" Economy Lavatory Trap, Vented, Complete with Pipe to Floor, and Vent to Wall, with Flanges...... Each, 3.75

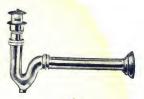


PLATE D

1 14-inch Half "S" Trap, wit	h Patent Overflow	Plug, not Vented 2	2.25
1 /2-men Han is Hap, wit	n ratent Overnow		.85



### SHORT DRAWN LEAD TRAPS.



PLATE A FULL "S" TRAP.



PLATE B 3-4 "S" TRAP.



PLATE C



PLATE D RUNNING TRAP



PLATE E RUNNING "Y" TRAP.



PLATE F BAG TRAP.

	Weight per Foot, Pounds	Size, Inches	Full "S"	" <sup>3</sup> 4",	" S"	Run- ning	Run- ning "Y"	Bag
Standard Medium Extra Heavy Standard Medium Extra Heavy Standard Medium Extra Heavy Standard Medium Extra Heavy Standard Extra Heavy Standard Extra Heavy Standard Extra Heavy Standard	12 22 22 22 22 22 22 22 22 22 22 22 22 2	1 144 1 144 1 144 1 142 1 142 2 2 2 3 3 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.58 .73 .87 .90 1.03 1.25 1.38 1.65 1.85 2.69 3.25 4.30 5.00 6.06	.55 .66 .81 .81 .94 1.15 1.30 1.53 1.73 2.62 2.97 3.07 3.95 4.90 5.89	.51 .64 .77 .75 .80 1 .20 1 .42 2 .24 2 .24 2 .58 2 .49 3 .25 4 .02 4 .84	.48 .58 .70 .72 .1.03 1.13 1.32 1.46 2.35 2.53 3.28 4.80	.52 .65 .74 .76 .94 1.09 1.34 1.45 1.46 2.88 3.15 4.05 4.92 5.89	.63 .87 1.06 1.08 1.28 1.54 1.73 2.08 2.33 3.35 3.96 4.77 6.30 6.85 8.30



### EXTRA LONG DRAWN LEAD TRAPS.



PLATE A
EXTRA LONG FULL "S."



PLATE B
EXTRA LONG FULL "S."



PLATE C EXTRA LONG 3-4 "S."



PLATE D EXTRA LONG 3-4 "S."



PLATE E
EXTRA LONG 1-2 "S."



PLATE F EXTRA LONG 1-2 "S"

	Weight per Foot, Pounds	Size, Inches	Full,	" <sup>3</sup> 4,,	"S"	Run- ning	Run- ning "Y"	Bag
Standard Medium Extra Heavy Standard Medium Extra Heavy Standard Medium Extra Heavy Medium Extra Heavy	1 ½ 2 1½ 2 1½ 2 1¼ 3 1½ 3 1½ 3 1½ 4 1½	1 1/4 1 1/4 1 1/4 1 1/2 1 1/2 1 1/2 2 2 2	.93 1.19 1.44 1.36 1.64 1.95 2.00 2.40 2.69	.85 1.04 1.28 1.19 1.43 1.72 1.76 2.08 2.33	.76 .95 1.14 1.02 1.22 1.50 1.55 1.83 2.02	.82 1.01 1.23 1.15 1.41 1.65 1.67 1.98 2.18	.83 1.05 1.23 1.15 1.45 1.52 1.82 2.01 2.23	1.09 1.38 1.67 1.58 1.91 2.24 2.34 2.80 3.11

### LEAD BENDS.







PLATE B LONG LEAD BEND.

	Short B Center t		Long Bends, Center to End
Dimension Scale: 1 ¼-iuch. 1 ½-inch. 2 -iuch. 3 -inch. 4 -inch. 4 ½-inch.	7 in 7 34 in 8 14 in 10 in		6 in. 7 34 in. 8 34 in. 10 in. 11 in.
1½-inch.       Eacl         Long.       Eacl         Short.       Eacl         1½-inch.       Eacl         Long.       Eacl         Short.       Eacl	$\begin{array}{c} .30 \\ .25 \\ 2 14 \text{ 1b.} \\ .50 \end{array}$	2 lb. .41 .31 3 lb. .66 .51	$2\frac{1}{2}$ lb. $.50$ $.34$ $3\frac{1}{2}$ lb. $.79$ $.62$
3 14 lb.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	lb. 5 05 1	in.   3 in.   6 lb.   3.39   1.60   1.21
	4 in. 6 lb. 1.95 1.50 4 i 8 l 2.1	b. 8 40 2	2 in. 4 ½ in. 10 lb. 98 3.68 2.90

### EXTENSION BENDS.



1 1/4-INCH

Weight of Lead per Running Foot	1 ½ lb.	2 lb.	$2\frac{1}{2}$ lb.
Short Inlet End x 12 in. on Outlet End	.40	. 52	. 60
Short Inlet End x 15 in. on Outlet End	.47	.62	.72
Short Inlet End x 18 in. on Outlet End	. 55	.72	.84
Short Inlet End x 20 in. on Outlet End	. 60	.79	.92
Long Inlet End x 12 in. on Outlet End	. 46	.60	.70
Long Inlet End x 15 in. on Outlet End	. 54	. 70	.82
Long Inlet End x 18 in, on Outlet End	. 62	. 80	. 94
Long Inlet End x 20 in, on Outlet End	. 67	.87	1.02
For each inch of excess length over listed size on any shape of Trap or Bend add to the list of near-			
est listed size	.03 1/4	.04 1/4	.05

### LEAD PIPE.

AAA . Ex. Ex. Strong
AA . Ex. Strong
A . Strong
B . Medium
C . Light
D . Ex. Light
E . Aqu'dt



PLATE A

### LIST OF SIZES. WEIGHT PER FOOT.

Calibre of Pipe, Inches	Weight per Foot, Pounds	Average Length of Coils, Feet	Calibre of Pipe, Inches	Weight per Foot, Pounds	Average Length of Coils, Feet
3/8C	12 oz.	100	1 ¼ A	4 3/4	45
3/8B	1	125	1 1/4 A A	5 3/4	35
3/8A	1—4 oz.	100	1 14 AAA	6 34	25
3/8AA	1-8 oz.	85	1 ½E	3	50
½D	34	135	1 ½D	3 1/2	45
½C	1	125	1 ½C	4 1/4	40
½B	1 1/4 1 3/4	140	1 ½B	5	42
1/2A	1 3/4	120	1 ½A	6 1/2	32
1/2 A A	3	100	1 1/2 A A	7 1/2	25
1/2AAA	3	70	1 ½AAA	8 1/2 4 3/4	20
5/8D	1	125	2 D	4 3 4	30
5/8C	1-8 oz.	85	2 C	6	35
5/8B	2	100	2 D. 2 C. 2 B. 2 A. 2 AA. 2 AAA.	7	30
5/8A	$\frac{2}{2}\frac{1}{34}$	85	2 A	8	25
5/8AA	2 3/4	7.5	2 AA	9	23
5/8AAA	3 1/2	60	2 AAA	1134	20
<sup>3</sup> / <sub>4</sub> D	1 1/4	80	3 B	9	12
3/4 C	1 3/4	65	3 A	. 13	12
3/4 B	21/4	85	3 AA	16	12
34A	3	70	3 AAA	20	12
3/4 A A	$\frac{3\frac{1}{2}}{4\frac{3}{4}}$	60	3 ½B	10	12
34AAA	4 3 4	45	3 1/3 A	1.5	12
1 D	9	65	3 1/2AA	18	12
1 C	2 ½ 3 ¼	50	3 ½AAA	22	12
1 B	3 1/4	65	4 E	5	12
1 A	4	50	4 D		12
1 AA	4 3/4	45	4 C	. 8	12
1 AAA	6	40	4 B	13 -	12
11/4E	2	50	4 1/2	14	12
1 1/4 D		50	4 1/2	18	12
1 1/4 C	3	45	5	20	12
1 1/4 B	3 3/4	55	5	31	10

Special sizes to order.

### LEAD SOIL PIPE IN 10 FOOT LENGTHS.

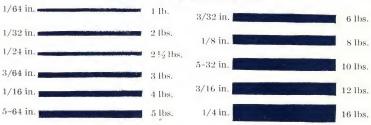
11/in 0 and 0 lbs som fort	11 9 : 9 1/ 1 # 11 6 4
1 ½ III 2 and 3 IDS. per 100t	$\parallel$ 3 in 3 ½ and 5 lbs. per foot
0 - 4 11 6 4	4 2 1 0 11 - 4 - 6
2 In 3 and 4 lbs. per loot	4 in 5, 6 and 8 lbs. per foot

### SHEET LEAD.



PLATE A

### APPROXIMATE THICKNESS AND WEIGHT OF SHEET LEAD PER SQUARE FOOT



### PURE BLOCK TIN PIPE.

1/8 in., 1 1/2 oz. per foot.

1/4 in., 3, 3 1/2, 4, 5, 6, and 8 oz. per foot.

 $\frac{3}{8}$  in., 4, 5, 6, 6  $\frac{1}{2}$  and 8 oz. per ft.

 $\frac{1}{2}$  in., 4, 4  $\frac{1}{2}$ , 5, 5  $\frac{1}{2}$ , 6, 8 and 10 oz. per foot.

5% in., 8, 9, 10, 12 and 16 per oz. foot.



34 in., 10 and 12 oz. per foot.1 in., 15 and 18 oz. per foot.

1 ¼ in., 1 ¼ and 1 ½ lbs. per foot

1½ in., 2 and 2½ lbs. per foot.

2 in., 3 lbs. per foot.

PLATE B



### PLATE C

### NO. 1 REFINED HALF AND HALF. STRICTLY HALF AND HALF.



PLATE D



We charge market rates for metals.



Will name prices on application.



### BRASS FERRULES.



PLATE A
TAPER END, FOR EXTRA HEAVY PIPE.



PLATE B BENT, WITH HUB.

2 x 1 ¼ in, x 4 in, long Per	Doz., 9.00
2 x 1 ½ in. x 4 in. longPer	Doz., 9.00
2 in. x 4 in. longPer	Doz., 9.00
$3 \text{ in. } x 4 \frac{1}{2} \text{ in. long.} \dots \text{Per}$	Doz., 17.00
4 in. x 4 ¾ in. long Per	Doz., 22.00

2	in									Per	Doz.,	12.00
3	in									Per	Doz.,	18.00
4	in											24.00



PLATE C EIGHTH BEND.



PLATE D
QUARTER BEND.

2 inPer Doz.		
3 inPer Doz.	, 18.00 3 in	 er Doz., 21.00
4 in Per Doz.	, 24.00 4 in	 er Doz., 27.00

### FERRULES. WITH BRASS TRAP SCREW.



PLATE E BRASS.



PLATE F

						Sizes Inches 2 3 4 5	6
Sizes In.	2	3	4	5			
			<del></del>			Price Ea30 .40 .50 .80	1.10
Per Doz.	10.00	18.00	24.00	48.00	69.00	Ex. HeavyEa60 .75 .95 1.25	1.95



### SOLDERING NIPPLES.





MALE.

### PLATE B

### MALE PLATE A

SizeInches	1.8	1/4	38	1/2	34	1
Price Per Dozen	3.00	3.00	3.00	3.60	5.40	7.20
SizeInchęs	1.14	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Price Per Dozen	10.80	12.60	18.00	33.00	48.00	81.00

### FEMALE PLATE B

SizeInches	1/8	1/4	3/8	1/2	34	1
Price Per Dozen	3.00	3.00	3.00	3.60	5.40	7.20
SizeInches	1 1/4	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
PricePer Dozen	10.80	12.60	18.00	33.00	48.00	81.00

### SOLDERING UNIONS.



PLATE C STRAIGHT.



PLATE D BENT.

### STRAIGHT PLATE C

SizeInches	L's	1/4	3/8	1/2	3/4
Price		4.20 9 oz.	4.20 1 lb. 1 ¼ oz.	4.80 1 lb, 12½ oz.	
SizeInches	1	1 1/4	1 1/2	2	
Price	8.40 3 lb. 10 ½ oz.	12.00 5 lb. 3 oz.	15.00 6 lb. 10 oz.	21.00 8 lb. 2 oz.	

### BENT PLATE D

	1	1 2			
SizeInches	1/3	1/4	3/8	1/2	34
PricePer Dozen WeightPer Dozen	5.40 1 lb.	5.40 1 lb. 1 ¼ oz.	5.40 1 lb. 11 1/4 oz.	6.60 2 lb. 9 34 oz.	9.00 3 lb. 10 oz.
SizeInches	1	1 1/4	1 1/2	2	
Price	12.00 5 lb. 5 oz.	16.20 7 lb. 8 oz.	22.80 9 lb. 9 oz.	30.00 11 lb. 12 oz.	



# CAST IRON SOIL PIPE.

SizeIn.	2	3	4	S	9	7	∞	10	12	1.5
Standard, Single Hub. Per ft. Standard, Double Hub. Per ft. Medium, Single Hub. Per ft. Medium, Double Hub. Per ft. Extra Heavy, Single Hub. Per ft. Extra Heavy, Ouble Hub. Per ft.	325 325 44 40 825 825 84 76 86	32 38 50 56 65		.60 .70 .90 1.00 1.15	.75 .90 1.05 1.35 1.35	1.00 1.15 1.70 1.75 1.95	1.25 1.45 2.25 2.25 2.25 5.25 5.25	2.00 2.40 2.65 3.15 3.00	3.00	4.50 5.00 6.00 7.00

## SOIL FITTINGS.

	$S_T$	STANDARD OR MEDIUM	SD O	R M	EDIU	M				Ext	RA F	EXTRA HEAVY	Α		
SizeIn	In. 2 3 4 5 6 8 2 3 4	3	4	N	9	-	=	2	3	4	_	w	9	00	
	.45	.701	00.	1.75	2.2	5 4.0	10	65	00.1	1.3	2	20	3.25	r.	00
Bends, 14, 18, 18, D. H. Bends, Ouarter 2 inch Heel or Side Inlet.	1.75	700 1	30	2.25	2.0			00 IV	.30	1.6	3.2	200	3.25	:	:
	1.10	1.60 2	25	3.50	4.7		-	55	30	3.5	20	00	6.50		: :
	1.402	2.00.2	.75	1,25	5.5	7.5	0 2	00	3.00	4.2	9	00	7.50	10.	00
	1.80	2.75 3	. 50	5.25	6.50			50	00'1	5.2	2	25	8.75	:	
	1.051	1.151	. 09	2.50	3.00	0.50	0	55	.85	2.1	5	20	4.50	9	00
Bends, Long Sweep.	1.201	1.502	00.	3.00	4.00		-	80	00.3	2.7	4	00	5.50	7	50
	.80	1.552	.15	3.15	3.7		<b>-</b> -	05	.80	2.6	5	1.5	5.25	:	:
	1.101	1.85 2	.45	3.65	4.2	:	-	35	. 10	2.9	5	65	5.75		:
Bends, Double Quarter	:	2	. 50		:	:		:	:	3.2					:
Bends, Combination Y and 1/8	1.502	2.003	00.	1.00			7	00	00.8	4.50	5	00	6.50		
Bends, Combination Y and 1/8 24 inch long	2.85			:	:	-	3	95	:	:					:
Bends, Combination Y and 1/8 36 inch long		9	.25	00.6			-	:	:	9.1	5 11.	00		:	
Branches, T. TY, Y and 1/2 V Str. or Red	. 70 1	.25/1	.75	2.25	3.50	0.90	0 1	00	. 65	2.4	3.	30	4.50	6	00
Branches, TY and Y Spec, Red			.10	2.75	4.2		-	:	:	2.9	3.	95	5.40		:
Branches, T & TY Tapped up to 2 in	1.45 1	.80 2	. 20	:		:	-	75	. 20	2.9	4	00			
Branches, Double Y, 1/2 Y Crosses, Str. or Reg. Red	1.402	2.05 2	. 60	3.35	5.25	0.69	0 2	00	.75	3.6	0 4	45	6.75	13	20

### CJ.Painear. 2. Co.

## SOIL FITTINGS. STANDARD OR MEDIUM

EXTRA HEAVY

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## SOIL FITTINGS. STANDARD OR MEDIUM

EXTRA HEAVY

In.	. 2	3	4	rc	9	8	2	3	4	22	9	∞
Extension Pieces, to extend 4 inches. Extension Pieces, to extend 6 inches. Extension Pieces, to extend 8 inches. Extension Pieces, to extend 10 inches. Extension Pieces, to extend 12 inches. Extension Pieces, to extend 14 inches. Extension Pieces, to extend 16 inches. Extension Pieces, to extend 18 inches. Extension Pieces, to extend 20 inches. Extension Pieces, to extend 22 inches. Extension Pieces, to extend 22 inches.	800 800 11.10 11.20 11.20 11.20 11.20 12.30 2.30	1.00 1.20 1.40 1.40 2.20 2.20 2.40 3.00 3.40	1.30 1.70 2.00 2.30 2.50 3.20 4.00	1.70 2.20 2.20 2.20 3.00 3.00 4.20 6.00	2.20 2.20 33.70 33.80 4.20 6.00 7.00 8.00		1.00 1.20 1.40 1.60 2.00 2.20 2.40 2.40 2.60	1.80 2.20 2.20 2.40 2.40 3.20 3.20 3.40	2.40 2.860 3.200 3.200 3.200 4.400 5.200 5.200	2.80 3.20 3.20 3.20 4.20 4.80 6.00 7.00 8.50 11.00	33.20 3.20 3.20 3.20 5.240 6.00 6.00 6.00 6.00	
Traps:— Hand Hole and Cover Traps, S. 34 S. P and Running.  Running. S. 34 S. P and Run Traps, with 2-in. Vent. S. 34 S. P and Run Traps, with 3-in. Vent. S. 34 S. P and Run Traps, with 4-in. Vent. S. 34 S. P and Run Traps, with 4-in. Vent. S. 34 S. P and Run Traps, with 5-in. Vent. Run Traps, only 3-in. Double Vent.  Run Traps, only 3-in. Double Vent.  Run Traps, only 3-in. Double Vent.  Run Traps, only 3-in. Double Vent.  Run Traps, only 5-in. Double Vent.  Run Traps, only 6-in. Double Vent.		1.50	2.00	3 4 4 4 3 4 4 5 4 5 4 5 5 5 5 5 5 5 5 5	5.00 6.30 6.50 6.75 7.00 8.00 9.00	5.00 10.00 6.00 11.50 6.50 11.50 6.50 12.00 7.00 12.00 8.00 13.00	1.35	2 . 2 . 3	3.00	4.75 5.50 5.75 6.25 6.25 6.25 7.75	7 78 88 88 10 10 111	75 13.75 000 13.00 000 11.50 75 14.50 75 14.50 00 15.00 00 17.00

## SOIL FITTINGS.

Lead Drum Traps

LEAD TRAPS AND BENDS CONTAINED IN A BARREL

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75 50 50 40 30 25 10 8 75 50 50 40 30 25 10 8 75 50 50 40 30 25 10 12 12 12 12 12 12 12 12 12 12 12 12 12	
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100 60 70 50 40 30 14 14 15 50 50 50 50 50 50 50 50 50 50 50 50 50	
75 50 50 40 30 25 35 35 40 30 25 24 20 35 100 25 25 25 25 25 25 25 25 25 25 25 25 25	ning
50 35 40 30 25 35 30 30 25 24 20 125 100 75 50 25	ing Y
35 30 30 25 24 20 35 105 100 75 25 25 25 100 25 25	
125 100 75 25	
100 75 50 25	bends.
	bends

## FERRULES. LEAD DRUM TRAPS AND

Size.      In.       2       3       4         T. Y. San. T. Cleanouts and P. R. Test Tees.       1.90       2.50       3.00       4.         * Traps, S. P. ¾ S. and Run, Sure Seal.       1.65       2.25       2.75       4.         * Traps, S. P. ¾ S. and Run, Deep Seal.       2.40       3.09       3.50       5.	6.00		4.00	5 75	8.00
1.90 2.50 3.00 1.65 2.25 2.75 2.40 3.00 3.50	5.75		4.00	5.75	8.00
.35 .15 .20 .25 .35 .35	3.23 .90 1.10 .40 .50	2.85 40 55 22 3.75 3.75 3.75	4.50	6.25 1.00 .50	8.50 1.25 .65

# \* Note, -- Philadelphia Regular Traps take same list.

## SADDLE HUBS.

SizeIn.	2 x 2	3 x 2 3 x 3	4x2,4x3 4x4	5 x'2, 5'x'3 5 x 4, 5 x 5	6x2,6x3,6x4 6x5,6x6
T. HubsEach Y. HubsEach	0.45	0.75	0.90	1.10	1.65



### PUMPS.







PITCHER SPOUT SUCTION PUMP. CISTERN SUCTION PUMP. HOUSE FORCE PUMP.

### PITCHER SPOUT SUCTION PUMP. WITH CLOSED REVOLVING BEARER TOP AND BOLTED BASE

No.	Diam- eter Cylinder	Stroke	Capacity per Stroke	Suction	Iron	Brass Lined	Porcelain Lined
$\frac{1}{2}$	2½ in. 3 in. 3½ in.	4 in. 4 in. 4 in.	.09 gal. .12 gal. .17 gal.	1 in. pipe 1¼ in. pipe 1¼ in. pipe	4.25 4.75 5.25	6.50 7.25 8.00	7.25
4 5 6	4 in. 4½ in. 5 in.	4 in. 5 in. 5 in.	. 22 gal. . 34 gal. . 43 gal.	1½ in. pipe 2 in. pipe 2½ in. pipe	$\begin{array}{c} 6.25 \\ 9.50 \\ 17.00 \end{array}$	$9.00 \\ 12.50 \\ 22.50$	

### CISTERN SUCTION PUMP. WITH REVOLVING BEARER TOP AND BOLTED BASE

No.	Diameter Cylinder	Stroke	Capacity per Stroke	Suction	Iron	Brass Cylinder
0 1 2 3 4 5 6 8	2 in. 2½ in. 2½ in. 2½ in. 3¼ in. 3¼ in. 3½ in. 3½ in. 4 in.	5 in. 6 in. 6 in. 6 in. 6 in. 6 in. 6 in. 6 in.	.07 gal. .10 gal. .13 gal. .15 gal. .18 gal. .22 gal. .25 gal. .33 gal.	1 in. pipe 1 in. pipe 1 ¼ in. pipe 1 ¼ in. pipe 1 ¼ in. pipe 1 ½ in. pipe 1 ½ in. pipe 2 in. pipe	3.50 4.00 4.50 5.00 5.50 6.50 8.00 10.00	5.50 6.00 7.00 8.00 10.00 13.00 18.00 25.00

### HOUSE FORCE PUMP. WITH REVOLVING BRAKE, AIR CHAMBER AND COCK SPOUT

No.	Diam- eter Cylin- der		Capac- per Stroke	Suction	Discharges	Iron	Brass Cylin- der
$\overline{\Lambda}$	3 in.	5 in. 6 in. 6 in.	.10 gal. .18 gal. .24 gal.	1 ¼ in. pipe 1 ¼ in. pipe 1 ½ in. pipe	1 in. pipe and 1 in. hose 1¼ in. pipe and 1 in. hose 1¼ in. pipe and 1 in. hose 1¼ in. pipe and 1 in. hose 1½ in. pipe and 1 in. hose	12.50 $14.50$ $21.50$	16.50 17.00 19.50 28.50 34.50

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